THE

CHICAGO MEDICAL EXAMINER.

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Original Contributions.

ARTICLE I.

MEDICAL ADVERTISEMENTS.

The committee to whom was referred the subject of immoral and injurious medical advertisements, respectfully ask the privilege of making the following report:—

Of all the various methods devised for obtaining money by false pretences, none are carried on so extensively, or are so prolific of evil to the community, as that of medical advertising in newspapers, handbills, &c. The extent of this systematic swindling cannot be appreciated without a somewhat extensive investigation of the subject. The simple fact, however, that nearly all the newspapers in the country have from one to four columns occupied with this kind of advertisements, paid for at ordinary rates, and the further fact that every alternate fence-post, board, rock, or door-step in the country is covered with the same kind of literature, shows that an aggregate of several millions of dollars are expended annually for this purpose. Of course, all these *millions*, with liberal additions, are received back from such members of the community as can be deceived by pretension and falsehood. The class of medical advertisements to which we allude may be divided into three varieties: First, such as set forth the efficacy and importance of particular medicines in the cure of ordinary diseases. Second, such

as represent the unusual and extraordinary skill and success of Dr. A. or Dr. B. in the treatment of this or that class of ordinary chronic diseases. And, third, such as relate directly to the treatment of the diseases and consequences of licentiousness.

The nature and objects of the first variety will be readily seen by the following extract, selected from the first advertisement of a medical character that met the eye on opening a daily newspaper:—

"Helmbold's Highly Concentrated Compound Fluid Extract Buchu. A *positive* and *specific* remedy for Diseases of the Bladder, Kidneys, Gravel, and Dropsical Swellings; for Weaknesses arising from excesses, habits of dissipation, early indiscretion, or abuse; for Decline or Change of Life, attended by indisposition to exertion, loss of memory, weak nerves, horror of disease, &c., &c."

The two leading traits of all this variety of advertisements are, first, the claim that the medicine is a "*positive and specific remedy;*" and, second, the enumeration of such a list of symptoms that every invalid will find among them some one or more which corresponds with his own, and be thereby led to imagine the medicine specially designed for his relief. The positive claim thus set up is known to be false, not only by every intelligent physician, but by the advertiser himself. But the unqualified assertion of curative properties, coupled with the ingenious enumeration of such symptoms as would apply to almost any chronic malady, is admirably calculated to win the confidence of the sick, so far as to make them desirous of giving it a trial. A trial involves the purchase of a bottle or box, as the case may be, and this accomplishes all the advertiser expects. The framing and publication of such advertisements is just as deliberate a fraud as it would be for an individual to enter a store with false testimonials of wealth and character, and thereby obtain a bill of goods on credit.

The nature and style of the second variety of advertisements is well-illustrated by the following, taken from another of our morning papers:—

"Dr. D. MacRae's Medical Institute, at 149 South Clark St.,

Chicago, Ill. P.O. Box, 2156. The above Medical Institute is intended for special treatment of all chronic diseases of the *Eye, Ear, Throat, and Lungs.* Having for years studied anatomically, physiologically, and pathologically, all diseases of the human system, together with all malignant diseases of a tumefied character, such as Cancer, Fistula, and Piles, are *successfully* treated. DR. D. MAC RAE."

This though rather less bombastic and pretentious than most of those belonging to this class, yet affords an excellent type of the whole. The Doctor's simple office is dignified with the title of "Medical Institute," to create the impression throughout the country that he is at the head of some hospital, school, or other organized institution. Then comes the claim of having devoted "years of study," in some extraordinary way, to certain chronic classes of disease; and, finally, the positive assurance that all affections of that particular kind are "*successfully*" treated. To say that such advertisements are barefaced and deliberate frauds on the public, does not adequately characterize them. Like the one just quoted, they all include a pretence of special attention to, and ability to cure certain diseases that are in their nature, to a great extent at least, incurable; and are directly designed by their authors to attract the attention and delude by false hopes such persons as have been long afflicted and are ready to listen to any pretensions and make any pecuniary sacrifices that are accompanied by brazen assurances of relief. As an illustration, take the subject of cancer. A little boy is attacked with the most malignant form of the disease, in the bone of one side of his head and eye. Its location and nature show clearly to every intelligent and candid surgeon that it is totally incapable of remedy. The parents are truthfully informed, by their regular medical attendants, of the nature of the case, and of the palliative measures which are all that can benefit the patient. But just now comes under the eye of the afflicted parent a newspaper advertisement, in which the doctor claims cancer as among the diseases "successfully treated" by him. As a forlorn hope he is sent for. With pompous pretension, he sets at naught the opinions given by the intelligent and candid physician or surgeon who had at-

tended the case, and authoritatively announces, that for fifty or one hundred dollars down, and as much more in a few weeks, he can remove the whole disease and have the patient restored to health. As drowning men catch at straws, so anxious parents, and adults weakened by disease, catch at every positive assurance, no matter how absurd. Consequently, the money is produced; the so-called doctor having been careful to secure the presence of a newspaper reporter, proceeds with the pretended operation, and the next morning we read, under the caption of "Important Surgical Operation," a glowing account of the removal of some formidable disease by Dr. M., after the patient had been given up by several distinguished surgeons. Thus the unprincipled charlatan pockets the poor patient's money, gets an editorial newspaper advertisement, in the form of a puff, and lies in wait for his next victim. Of course, in a few weeks, the duped patient finds his disease advancing more rapidly than ever to a fatal result, and silently sinks into his grave. But the newspaper report of the "Important Surgical Operation" is never corrected, and, consequently, its readers are left to wonder at the doctor's success, long after the poor patient is in his grave. It is surprising to notice the readiness with which newspaper reporters and proprietors are induced to become the medium of the grossest imposition upon the public, in relation to this class of cases. If they do it ignorantly, it is certainly high time they took measures to enlighten themselves. If they do it knowingly, for pay, then are they *particeps criminis*, in the meanest of all methods of obtaining money under false pretences. For it is difficult to conceive a meaner act than the deliberate deception of anxious parents or weakened and suffering invalids, for purposes of mere pecuniary gain.

The third class of advertisements, embracing those which the Society doubtless had more especially in view in appointing the undersigned committee, relate to the diseases and other consequences of licentiousness. It includes all those advertisements relating to "*Private Diseases*," the removal of "Female Obstructions and Weaknesses," and protection against too rapid an increase of families; whether they fill the columns of news-

papers, or disgrace the fence posts, street corners, &c., or are thrown in profusion into public conveyances, or upon the doorsteps of public and private dwellings. They constitute a class of reading matter too disgusting to describe, and too demoralizing to be tolerated for a day in any well-regulated community.

There are three varieties of this class of advertisements, two of which are found in the columns of newspapers, and the other, in the form of handbills and pamphlets, is pasted along the streets, thrown into public conveyances, and left upon the doorsteps of private dwellings. They all possess, in a greater or less degree, three qualities, namely, false pretensions, obscenity, and either direct or indirect encouragement to vice and crime.

The false pretensions consist in, first, the most abominable lying in regard to the previous education, experience, and official positions of the pretended doctors, for curing private diseases; and, second, the positive and unqualified promise to cure permanently and speedily, "all the chronic and private diseases of the two sexes." Whoever opens a newspaper, and glances at these advertisements, and then remembers that not one of these advertising pretenders has any actual medical education, or has ever studied medicine proper in their lives, and that they are not recognized as belonging to the medical profession by any respectable physician in the country, will have some idea of their impudently fraudulent character. And yet who can estimate the number of victims, of both sexes, who are annually caught, and their pockets emptied by these very pretensions.

Their obscenity consists in the enumeration of every variety of disease arising from illicit sexual intercourse, and vicious sexual indulgences, with minute and vulgar descriptions of the sexual organs, sometimes illustrated by cuts. It is impossible to have these advertisements before the youth of both sexes, in the family newspapers, in handbills along the streets, in pamphlets and cards thrown into houses and yards, without making them more or less familiar with the most debasing vices and the most loathsome diseases; and that too, in such a way as to make the former appear only as "*youthful indiscretions*," or

necessary appendages to human society, while the latter are stripped of all their terrors by the most positive assurances of speedy, safe, and permanent cures. And here comes in the strong encouragement given by these advertisements to vice and crime. The first step towards the indulgence in any vice or the commission of a crime, is to familiarize such vice or crime to the thought of the individual; and the second, is the positive assurance of immunity, or speedy relief, from whatever diseases or evil consequences may come from actual indulgence in the vice or commission of the crime. And in both these aspects, it would defy the ingenuity of man to devise anything more demoralizing to the community than the class of advertisements under discussion.

Their pompous pretensions and adroit enumeration and description of such diseases and organs as are calculated to awaken the curiosity of the young, are admirably calculated to attract the attention and familiarize the mind with thoughts of the most vicious character; while the deceptive assurances of sure and permanent cures, daily lessens the dread of consequences, until the vicious thoughts are recklessly accompanied by acts that leave upon the victim a moral and physical stain for life. But the most criminal quality of a certain variety of this class of advertisements remains to be noticed. We allude to those which directly and shamelessly encourage illicit and excessive sexual intercourse, both by the married and the unmarried, by promising safe and certain means for "*preventing an increase of family*," by either preventing conception, or procuring abortion. As a sample of this class, take the following, from the columns of one of our Chicago daily papers:—

"Highly Important to Married People.—New and Wonderful Discoveries in Physiology.—How to Control the Sex of Offspring, and *Prevent* an Increase of Family, with *Absolute Certainty*, without the possibility of failure, &c., &c."

No language can express the depth of depravity that dictates such advertisements, or the demoralizing effects they produce, especially upon the female sex. The fundamental idea set forth is, that free sexual intercourse may be indulged, while by

the use of certain medicines, or the adoption of certain measures, the natural and ordinary consequences of such intercourse can be safely and certainly prevented. This idea, though utterly false in itself, has, nevertheless, gained such universal distribution and credence, during the last quarter of a century, that the number of painful and protracted uterine diseases, and the number of actual deaths, induced by the use of medicines and other means for either preventing conception or inducing abortion, is actually frightful to contemplate. Scarcely a week passes in any of our larger cities, that some female does not sacrifice her life as the direct consequence of such attempts, not one in twenty of which are ever known to the public, or outside of the immediate agents and attendants. The pernicious effects of the idea inculcated in these advertisements, and by a class of professional male and female murderers who, for $25.00 or $50.00, will undertake, deliberately, the work of fœtal murder, is not restricted to the production of a frightful amount of disease and death, but is plainly visible in the rapidly increasing repugnance manifested by married people, of both sexes and in all ranks of society, against bearing children or discharging the ordinary duties of parentage. It would require but a moderate amount of investigation, to show that this actually constitutes one of the most corrupting and destructive evils of modern society.

Having thus analyzed the character, and briefly stated the demoralizing and destructive consequences of what are usually styled *medical advertisements*, the next inquiry is, who are the parties responsible for their existence, and, of course, for their consequences also? The parties primarily responsible, are the authors of the advertisements, and the proprietors of newspapers who furnish the medium through which most of them reach the public. That newspaper publishers are morally and justly responsible for the character and influence of the advertisements they daily send to the firesides of their patrons, is as clear and certain as that the receiver of stolen goods is *particeps criminis* with the thief. They cannot plead ignorance of the character of the advertisements, for they are as much

bound to know the character and influence of the advertising as of the editorial columns of the sheet they publish. The truth is, that Thompson, Bigelow, Whittier, Helmhold, or some other of the same genus, sits down and writes a quarter, half, or whole column of reading matter, in the form of an advertisement, containing the most glaring falsehoods, the most obscene allusions, and the most artful covering of loathsome vices, under the sugared phrases, "Unfortunate," and "Youthful Indiscretions," and, for a stipulated sum in money, the publisher deliberately puts the matter in print and sends it directly into from one to twenty thousand families daily or weekly, as the case may be. Now, by what rule of ethics, morals, or logic can the maker of the advertisement be held responsible for its legitimate effects, without including with him the publisher also? Advertising is, emphatically, the capital stock of the charlatan and nostrum vender. The proprietors and publishers of newspapers deliberately furnish this capital stock and share largely in the pecuniary profits. Can they escape an equal share of responsibility?

But while the makers and publishers are primarily responsible for their character and all the consequences that flow from them, in a secondary or more remote sense, our legislators, both State and Municipal, and our courts of justice are scarcely less so. For it is universally conceded to be the fundamental duty of the one, to enact such laws as will protect the lives and property of all classes of citizens, and of the other, to see that such laws are faithfully executed. And, certainly, in regard to no class of citizens, is this duty more sacredly binding, than in regard to such as are afflicted and enfeebled by disease. Practically, however, this is almost the only class, in our country, whose interests are left fully exposed to the prey of every species of pretension and fraud. If a man, by false statements, induces a merchant to sell him a bundle of goods on credit, he is amenable to prompt arrest and punishment. But if the unprincipled empiric sends, through the newspapers or by handbill, a totally false statement of his education, and ability to cure certain diseases, and thereby induces the invalid to employ

and pay him for services that are worse than useless, he pockets his ill-gotten gains and continues the systematic work of deception with impunity. It is true, that we have upon the statute books of this State adequate laws for the punishment of fraud and deception, but it is evident that they were framed with direct reference to the transaction of ordinary business; and it is only by a judicial extension of the principles they involve, that they could be applied to the protection of the sick against the fraudulent pretensions of the advertising charlatan. It is the duty of our legislators to so revise the statutes on this subject, as to protect the sick with the same directness and efficiency as they do the merchant or the mechanic. We have, also, in the municipal laws of our city, a section prohibiting the exposure or sale of obscene, lewd, or demoralizing books, pamphlets, cards, &c., which fully recognizes the correct principle, that the community needs protection in this direction. But the language needs revision, to make the principle fully and practically apply to the suppression of all the advertisements and handbills relating to the diseases and consequences of licentiousness. That they are obscene in their nature, and, in their influence, corrupting to public morals, few reflecting men will deny. Therefore, laws for their suppression are as appropriate as laws for the suppression of licentiousness itself.

Hence, if, as we have endeavored to show, the whole series of medical advertisements relating to particular medicines, to doctors treating special diseases with extraordinary skill, and to the treatment of the diseases and other consequences of licentiousness are justly amenable either to the charge of attempts to obtain money by false pretenses, or to that of obscenity and corruption of public morals, and often to both, the remedy is obvious. It is, or should be, the duty of the prosecuting attorney of every judicial district, to present the authors and publishers of every such advertisement to the grand jury, for indictment and suppression. The recent case in the Recorder's Court, in this city, which resulted in imposing a fine of $100 on a notorious "private disease" doctor, for printing and dis-

tributing *obscene* pamphlets or handbills, shows that some, at least, of those occupying judicial positions, are ready to discharge their duty, in regard to the evils of which we complain. To bring about the proper legislative and judicial action, however, public sentiment, generally, must be awakened and corrected. For this purpose, it is the duty of members of our profession to more frequently expose, through the public press, such cases of gross imposition and fraud as are almost constantly coming under their direct observation. In furtherance of the same object, special efforts should be made to patronize and sustain the small number of newspapers and periodicals that actually exclude from their columns all such advertisements as are alluded to in this report. This would strongly encourage an increase in the number of such papers, until newspaper proprietors, generally, would ultimately find their *pecuniary* interests coinciding with their moral obligations in relation to this subject.

N. S. DAVIS,
Chairman.

ARTICLE II.

REPORT ON THE SANITARY CONDITION OF CHICAGO, AND THE PREVALENCE OF DISEASES, FROM AUGUST 1ST TO DEC. 1ST, 1865.

By N. S. DAVIS, M.D., Prof. Practical Medicine, Chicago Medical College.

Read to the Chicago Medical Society, December 22d, 1865.

The last report in relation to the prevalence of disease in this city, made by the undersigned committee, ended with the 1st of August. The present is simply a continuation, from the 1st of August to the 1st of December. From the 1st to the 26th of August, the atmospheric or meteorological conditions were similar to those of the last half of July, viz., cold and wet, with a prevalence of winds from the north, north-west, and north-east. During the first eleven days of the month, the rain storms were very severe, amounting in several localities in Wisconsin, Northern and Middle Illinois, and at South Bend, Indi-

ana, to tornadoes of sufficient force to destroy crops and unroof houses. From the 1st to the 27th of the month, there were not three successive days of ordinarily hot summer weather, with winds from the south or south-west. During the same period of time, there occurred but few attacks of diarrhœa or cholera-morbus; but dysentery and typhoid fever continued quite prevalent, the latter, more especially, during the last half of the month. From the 15th to the 19th, the weather was clear and dry, but unusually cold for the season of the year, and was accompanied by a large number of cases of catarrhal irritation, with severe cough and soreness in the chest. Many of the cases of continued fever were severe, and presented more of the characteristics of typhus than of enteric typhoid fever. During the last four days of the month, the atmosphere became hot and oppressive, with winds from the south and south-west. The same characteristics were predominant during the first half of September. This was accompanied by a marked increase in the attacks of serous diarrhœa, both in children and adults.

Some of these attacks of bowel-affection, like those occurring during the first week in July, were severe, and presented symptoms much resembling epidemic cholera, such as rice water discharges, sunken eyes, huskiness of voice, small and weak pulse, with muscular cramps. But the large majority of cases were mild. From the middle of September to the 1st of December, the weather was unusually dry, pleasant, and cool.

Continued fevers, that began to be quite prevalent during the latter part of August, increased in frequency and severity during September and October; and after the two weeks of hot Summer weather, ending with the second week in September, true malarious fevers, both of the intermittent and remittent types, prevailed to a moderate extent, but decidedly more than for several years previously.

The unusual influence of malaria, as a morbific agent, was seen in the exacerbating character of many of the cases of typhoid and typhus. During the two months last named, it was very common to meet with cases of fever that had been ushered in with a chill, and which would be characterized, dur-

ing the first four or five days, by such distinct exacerbations and remissions as to induce the medical attendant to regard them as true cases of periodical fever, and, consequently, to administer quinine in efficient anti-periodic doses. Instead of arresting the progress of the disease, however, it only lessened the distinctness of the exacerbations, while the fever continued, and, during the second week, developed fully the characteristic phenomena of typhoid or typhus. The unusual indications of the influence of malaria in producing periodical fevers, and modifying the symptoms of the early stage of many cases of the continued type, has not been limited to this city, but has been general over the North-west. At least, such has been the representation of correspondents from various localities in the interior.

After the middle of September, the prevalence of bowel-affections rapidly diminished, while another disease of a severe character began decidedly to increase, especially in the south-western portion of the city. We allude to a modified form of diphtheria and diphtheritic croup. It attacked children much more frequently than adults, though the latter were not wholly exempt. In a large majority of cases, the disease commenced obscurely, and with apparent mildness. The child would appear fretful and peevish, with slight feverishness for four or five days, during which the urinary secretion was generally scanty, and the bowels moderately loose, though sometimes the reverse. When loose, the discharges were generally semi-fluid and very offensive to the smell, coupled with a loss of appetite. Soon, there would commence an unusual flow of saliva, with slight swelling of one or both cheeks, and also of the salivary glands. On examining the mouth and fauces, usually the inside of the swollen cheek, the tonsils, and, sometimes, the edges of the tongue would be seen dark-red, swollen, and the mucous membrane more or less ulcerated, but very rarely more than the slightest traces of diphtheritic exudation or false membrane. The disease, thus developed, would often continue to increase, until the cheeks, sub-maxillary, and parotic regions were much swollen, and the inflamed spots in the mouth and fauces covered

with ragged and extensive ulcerations, causing the saliva and breath to be fœtid, and the deglutition to be difficult. In the meantime, the patient manifests much languor and debility, with a soft and weak pulse, and a distinct increase of febrile action during the evening and first half of the night. In a few instances, during the second week, a slight exanthematous rash was noticed on the skin, and, at a later period, purple spots on the lower extremities, and an œdematous swelling of the tops of the feet. After two or three weeks, a majority of the cases began slowly to convalesce, and ultimately recovered. In a considerable proportion of the cases, however, after the first week, the local inflammation invaded the larynx, inducing all the well-characterized symptoms of diphtheritic croup, and causing a fatal result in from one to three days. In a smaller number of cases, the disease attacked the larynx primarily, inducing the ordinary symptoms of croup, with some tumefaction in the parotid and sub-maxillary regions, and death by suffocation in from 12 to 72 hours. These cases differed in their symptoms from ordinary inflammatory and pseudo-membranous laryngitis or croup, in the lower grade of febrile action, the softer and weaker pulse, and in the tumefaction of the glands in the parotid and sub-maxillary spaces.

Most of the cases of diphtheria observed during the past autumn, differed, in some important respects, from the same disease as it prevailed epidemically in this city, and many parts of the country, five or six years since. In the cases that have come under my observation this season, there has been much less white diphtheritic exudation upon the mucous membrane of the mouth and fauces, and a greater tendency to irritable, phagadænic or spreading ulceration. In a much greater number of cases, there have been observed, this season, œdematous swellings of the feet, with purpuric spots on the legs, especially when the disease ran a protracted course. One case, that occurred recently, on South Union Street, near Bunker, presented some symptoms so peculiar that a brief description may not be devoid of interest. The patient was a young man, native of Ireland, and usually enjoying good health. In the latter

part of November, he had one or two teeth filled by a dentist. In about four days after, the throat and mouth were attacked with inflammation, and speedily became covered with a thick, white, tenacious, diphtheritic exudation. The swelling extended so rapidly to all the tissues in the front and lateral parts of the neck and the face below the forehead, that when I visited him, the third day, the nose, lips, cheeks, chin, sub-lingual, submaxillary, and parotid regions were swelled to such a degree, that the skin was shining and tense, the eyelids nearly closed, the jaws fixed or capable of being separated not more than a quarter of an inch, and all the tissues affected, extremely dense or unyielding to pressure. So far as the mouth and fauces could be seen through the limited opening of the jaws, the buccal mucous membrane was covered with a white, membranous exudation, with considerable tenacious mucus rattling in the fauces, and some difficulty of deglutition. But, while the interior of the mouth thus presented the well-marked appearances of diphtheria, the color of the skin over the nose, lips, and cheeks was that of a dark erysipelatous redness, with several small vesicles upon one cheek. The pulse was moderately full, but soft and frequent; the breathing noisy from mucus in the fauces, but not difficult; the mental faculties dull, and sometimes wandering; the urine scanty, and depositing a reddish sediment, and the intestinal discharges natural. In this case, we certainly had the union or intermingling of the symptoms of both diphtheria and erysipelas. During the first four days, the patient was treated with permanganate of potassa, one grain to the ounce of water, of which a tablespoonful was given every two hours, and a wash for the mouth and throat, consisting of chlorate potassa, one and a-half drachms, tinct. belladonna, three drachms, and hydrochloric acid, fifteen drops, in four ounces of water. During these four days, the local inflammation abated, the tissues of the face and neck became softer, and some of the diphtheritic coating in the mouth became detached, but his pulse became weaker, his mind more wandering, and he was much annoyed by a harassing cough, apparently from the constant accumulation of mucus in the pharynx. The permanganate

of potassa was discontinued, and twenty drops of the tincture of chloride of iron given in its place, while the cough and restlessness was allayed by a teaspoonful of the following solution every four or six hours, viz.:—

℞. Muriate of Ammonia,---------- ℥iij.
Iodide Potassa,---------- ℥ij.
Sulph. Morph.,---------- 3 grs.
Syrup Liquorice,---------- ℥iv.

Mix.

The swollen parts of the face and neck were also wet with the following liniment every four or five hours, viz.:—

℞. Camph. Soap Lin.,---------- ℥iij.
Tinct. Iodine,---------- ℥j.

Mix.

Under this treatment, aided by beef-tea, chicken broth, milk porridge, &c., for nourishment, the swelling and hardness of tissues gradually subsided; the exudations and redness disappeared from the lining of the mouth and fauces; and in about two weeks from the commencement of the attack, the patient was so far recovered as to be able to return to his home, in LaSalle.

That diphtheria, of a decidedly asthenic character, has prevailed to a considerable extent during the last three or four months, chiefly in the south-west part of the city, there can be no doubt. But the great tendency on the part of the people and of some members of the profession, to confound all cases of catarrhal angina, tonsilitis, and inflammatory croup, together with true diphtheria, under the latter title, renders it impossible to make even a proximate estimate of the number of cases in any given month.

That bowel-affections, continued fevers, and diphtheria have prevailed about in the order set forth in the preceding pages of this report, is corroborated by the imperfect statistics of mortality furnished by the health-officer of the city. Thus, in August, the whole number of deaths was 464, of which 200 were represented as having resulted from bowel-affections, 21 from continued fevers, 9 from diphtheria, and 8 from croup.

In September, the whole number of deaths was 346, of which 108 were from bowel-affections, 24 from continued fevers, 11 from diphtheria, and 14 from croup. In October, the whole number of deaths was 360, of which 45 were from bowel-affections, 28 from continued fevers, 36 from diphtheria, and 40 from croup. In November, the whole number of deaths was reported to be 299, but no details are given in regard to the supposed causes of death. It will be observed that the number of deaths attributed to diphtheria and croup in October, was three times greater than in either of the preceding months; and we think the number in November was not much less.

The south-western part of the city, where a large majority of the cases of diphtheria and croup occurred during the months of October and November, is occupied almost wholly by the laboring classes, and the streets not only have no sewers, but even the roadside ditches are almost constantly filled with slop-water, garbage, and mud.

We have associated diphtheria and croup together, because personal observation has satisfied us that full half of the deaths attributed to croup were from diphtheria extending into the larynx. It is to be regretted that practitioners and writers have not maintained a more constant and definite distinction between these two diseases. Inflammatory croup, or laryngitis, is a simple local inflammation, as much so as tonsilitis, pneumonia, or pleurisy. It is never accompanied by swelling of the glands of the neck; diphtheritic exudations upon cut or abraded surfaces in other parts of the body, and fœtid breath; or followed by albuminuria, dropsy, or paralysis; all of which, however, are the common accompaniments or sequelæ of diphtheria. Hence, the latter is a general disease, involving, primarily, a morbid condition of the blood and of the vital properties of the tissues, with a constant tendency to develope a specific grade of local inflammation, most frequently in the fauces and glands of the neck, but which may be developed in almost any of the membranous structures of the body. Consequently, there is the same propriety in maintaining the distinction between laryngitis or inflammatory croup, and diphtheria accompanied

by specific inflammation in the larynx, as there is between simple tonsilitis and scarlatina accompanied by anginose symptoms. In regard to the special pathology and treatment of diphtheria, there is yet much to be learned. To be told that it is a blood disease, or dependent upon a blood poison, affords us but little satisfaction or profit, so long as we are left wholly in the dark in regard to the nature of the morbid condition of the blood, or of the poison that is supposed to pervade it. That the blood is in a morbid condition, all the general symptoms, as well as the exudations upon inflamed surfaces, clearly attest. But is such morbid condition consequent on the introduction of some subtle poison from without, or on some primary change in the properties of the organized structures by which the processes of disintegration are altered and their products returned into the blood in such condition as to render the whole mass morbid? The latter supposition appears to me much more in consonance with all the facts belonging to the history, symptoms, and consequences of the disease than the former. That we have diphtheritic and true plastic, or pseudo-membranous, exudations in two widely different, if not opposite, conditions of the blood and vital properties, is evident from well-known pathological facts. Thus, the infant, in the first few days of its existence, if it fails to have a good supply of milk, and its nutritive processes fail to become established and active, will generally have its mouth, tongue, and fauces all covered with a white diphtheritic or curdy exudation. The adult, in the last stages of chronic disease, consumption for instance, when the tissues are wasted, and the function of nutrition nearly suspended, will often have a copious white exudation over the greater part of the mucous membrane of the mouth and fauces. Certainly, no one would regard the exudation in such cases as dependent on any extraneous poison imbibed into the blood, or upon any true plasticity of that fluid. On the contrary, it is clearly the result of an extremely asthenic condition of the system, with deficiency of such constituents of the blood as naturally retain the albuminous and fibrinous constituents in a soluble state. I believe

that the exudations in true diphtheria result from strictly analogous morbid conditions.

That the disease is decidedly asthenic in its nature, is claimed by almost all writers on the subject, and generally assented to by the profession. That this asthenic state depends on, or consists in, deficiency of certain elements of the blood, coupled with a depressed and perverted state of vital affinity, I am fully satisfied, although I am not yet prepared to point out the exact elements at fault. The exudations in diphtheria and other asthenic conditions of the system differ in four important particulars from the true plastic or pseudo-membranous exudations resulting from simple acute inflammation. First, they appear and disappear with great rapidity, often several times during the same sickness. Second, they are accompanied by a tendency to sanious and offensive discharges from, and often ulcerations of, the membranes on which they appear. Third, the diphtheritic exudation itself, as seen under the microscope, presents cells of smaller size, arranged more in rows, and more resembling pus cells or globules, than the plastic exudations of simple inflammation. Fourth, the diphtheritic exudations all tend to ultimate dissolution, while the plastic exudations of simple inflammation tend to completeness of organization, and often become permanently identified with the original tissues.

If the foregoing statements are correct, they leave no room for doubts in regard to the propriety of maintaining a clear distinction between diphtheria complicated with specific inflammation of the larynx, and simple laryngitis or inflammatory croup. They are not only diverse in their pathology, but equally so in the indications they present for remedial treatment—the one requiring tonics, restoratives, and nutrients, the other, depletives, alteratives, and abstinence.

For nearly 30 years, we have been in the habit of meeting a greater or less number of cases of acute laryngitis or croup during the cold part of every year, and we have regarded the prompt administration of an emetic, followed by leeches to the neck, mercurial alteratives, alkaline nauseants, and such agents as speedily lessen the plasticity of the blood and the morbid

sensitiveness of the solids, as affording the only reasonable hope of effecting a resolution of the inflammation, and ensuring the safety of the patient. But whoever applies the same remedies to the treatment of diphtheria, whether accompanied by exudadations in the fauces, larynx, or elsewhere, will certainly have no reason to boast of his success in restoring the health of his patients. On the contrary, in the early stage of the latter disease, we must endeavor to correct the depraved condition of the blood, increase its capacity for the absorption of oxygen, and sustain the vital affinity of the tissues by the free use of permanganate of potassa, or the chlorates of potassa and soda acidulated with hydrochloric acid, followed, in the latter stages, by the tincture of the chloride of iron, quinine, &c., with the inhalation of such vapors as tend to allay irritation of the mucous membranes, and dissolve the adherent exudations. Bland and simple nourishment must also be carefully administered throughout the whole course of the disease.

The object of this report, however, is simply to give a history of the prevalence of diseases and their connection with atmospheric and local causes, and not a discussion of their pathology or treatment. Throughout, the month of November was unusually mild and dry, and the prevalence of diphtheria and continued fevers declined both in number and severity. Hence, that month gave a gross mortality of 61 less than the preceding month. In our previous report to this Society, attention was called to the fact that we have no reliable register of the causes of death in our city. In view of expected epidemics of a certain character during the coming Spring and Summer, these statistics become of very great importance, and it is to be hoped that the Society will take immediate measures to bring about the necessary action of the city authorities.

All of which is respectfully submitted.

Selections.

SOME OBSERVATIONS ON BLOOD DISEASES.

By EDWARD B. STEVENS, M.D., of Cincinnati.

[From the Transactions of the Ohio State Medical Society.]

It is not the purpose of the present paper to present a systematic essay on those diseases which are supposed to be associated with a poisoned condition of the blood; but rather such reflections on the whole subject as may serve to present with fairness some of the most prominent points of doctrine now entertained. To go beyond this would require a maturity of investigation that few of us dare aspire to. Indeed, the more carefully we pursue our researches upon these points, the less inclined we are to express our opinions dogmatically.

Two extreme schools in medical opinion have always prevailed as to the general pathology of morbid impressions; and two extremes of therapeutics, to a certain extent, correspond with our pathology; and thus, as we lean in our educational prejudices, to *humoralism* or *solidism*, we are very apt to become wedded to ideas of one or the other direction of thought, provoking a disposition to make light of all views not set to our peculiar theory, and rendering us forgetful of that which now seems the most satisfactory view, that there are varied means of receiving morbid impressions, and that there are varied directions toward which we should apply our therapeutical agencies.

In the present state of our physiology, we suppose the constitution of the blood, its office, and the supply of its elements are pretty generally agreed upon. Through the medium of that fluid, nutriment for the general supply of the system and for the constant repair of each individual tissue is steadily afforded. The blood not only is the machine which matures and prepares these elementary materials, it also is its own disbursing agent, whose unerring instinct bestows upon each needy individual exactly its requisite material.

Now, in health there is a tendency to a certain consent standard, of uniform constituency in the composition of the blood, and yet various circumstances may modify the relative proportion of its elements to a certain extent, without producing any manifest effect on the state of the organism which can really be

regarded as pathological. Diet, exercise, hunger, exposure, and a variety of constantly changing circumstances, may give a large amount of red corpuscles, or an increase of fibrin, or an excess of water, etc., etc., and yet the health of the individual not undergo any speedy marked detriment. There would seem to be certain, not very clearly understood, compensating elements of control in the system, which for a time enables it to resist these constantly occurring vibrations from what might be supposed to be a healthy standard.

On the other hand, we are remarkably impressed with the fact of how slight a change in the normal arrangement and proportion of the elements of the blood may initiate the most serious morbid processes, and secure the most fatal results.

Furthermore, it is to be borne in mind that not all deviations from a normal standard of the blood, associated with morbid conditions of the system in any of its organism, are by any means to be regarded as *true blood diseases*. That the blood is lacking in its proper elements, or there is a disproportion in their arrangement, or there is a foreign element present, does not necessarily imply that the deceased condition of the system is the result. The state of the blood may happen as a regular link in the chain of morbid processes otherwise progressing; and here is apt to be one fault that from one instance or group of facts, we are so prone to generalize. The remark, however, suggests to us to look at the blood as a diseased structure from several aspects; and we shall do this all the more satisfactorily to ourselves if we fortunately happen to have no established theories to control *us*, or be themselves unsettled.

(*Food.*) In our reflections upon this subject, we are by no means to forget the relation of food to the blood condition; for while it is true that very many apparently and actually diverse elements of diet seem to afford a sufficiently uniform state of the blood, yet the instinctive capacities of appropriation and assimilation will not meet every embarrassment. The bee hovers over the sweetest clover fields and the most filthy cesspool, and her honey sac is yet abundant in its pure secretion. So, too, the digestive apparatus of man elects from a wonderful variety of substances the elements which finally become converted into the uniform blood structure. Nevertheless, we observe after all that certain laws do hold, and will not suffer to be lightly regarded or trifled with.

Thus, for example we find that there is a necessity for regular supplies of fluid. If a man be entirely deprived of water for eight or ten hours, there follows exhaustion in a marked

degree, while he may pass the same length of time without solid food without any serious or special inconvenience. So, too, the experiments of physiologists have shown that animals supplied alone with water live several days longer than those supplied alone with solid food. We do not propose in the present paper to discuss the philosophy of these facts, but simply allude to them as links in the chain of facts, illustrative of the vitality afforded through the blood-status; but this being the recognized vehicle whereby nutriment finds its ways to the tissues no circumstances must be permitted to vitiate its elements. *Chloride of sodium* is one of the inorganic materials which require to be afforded with very considerable regularity; and certain well known pathological conditions are manifested with the deprivation. In the natural history of this food question, the natural craving of the human species for vegetable food, whereby the starchy or saccharine elements are afforded, as also the desire for oleagenous food, becomes highly suggestive, taken in connection with the reflections we are engaged in considering. So far as the craving for vegetables is concerned, it is found that even in certain pathological states, as for example in diabetes where a strictly animal diet has been persisted in as a means of therapeutics, yet very soon the instinctive craving becomes too imperative to be overlooked, and the treatment is abandoned.

Certain products of the blood, which we must confess, however, are not very well understood, are materially influenced by the character of the food. Of these are urea, the urates, carbonic acid, and the excretions generally. And indeed this is true whether we regard these as products of the blood direct, or results of disintegration, or whatever theory we may adopt.

Now, bearing in mind these well known elements of a healthy blood constitution, crudely expressed as they are, it requires no elaboration of facts or illustration to suggest the subtle influence of improper diet, or want of diet, or irregular diet, of bad air, of deranged or arrested eliminating function, together with an endless list of occurrences or circumstances which will by some of its processes materially change the blood in one of at least three ways: viz., an excess of natural elements, a loss of natural elements, the introduction of various unusual or foreign elements.

Either of these conditions of abnormal constitution are manifestations of blood disease, or speedily provocative of blood disease.

In the whole range of therapeutical agents, we have no more

interesting group of study than those remedies which from their supposed peculiar action are styled *Restoratives* and *Catalytics*.

That a great variety of medicines, when administered, produce more or less important modifications in the blood, seems now too well established to require any elaboration in such a paper as this. Whether they act through the blood directly or by virtue of some indirect sympathetic influence is also immaterial to our present purpose. What we most wish to know is that medicines do change the character of the blood and through this structure affect all the other structures of the system. Mr. Headland, in his excellent book, regards all these remedies as acting in the blood, that they pass into the blood, and produce their influence there. He styles them *Hœmatics*.

It is certainly not very difficult to understand that a great many diseases arise simply from a want of some one or more of the normal constituents of the blood. That this is the case in simple debility, would appear plain enough. We are quite agreed that anæmia occurs from a deficiency of the hæmatosin of the blood corpuscles. Certain diseases are associated with a lack of the salts of potash. In malignant cholera there is an absence of the watery particles of the blood. Some forms of urinary disease are manifested by their peculiar urinary deposits—here there is probably a deficiency in the elements of the blood whose office is to hold these elements in solution. We have thus suggested a wide range of pathological condition, in which there is some defect in the blood elements. Medicines which supply this defect serve to restore a correct condition of the faulty functions, hence we style them Restoratives. We must not in this connection lose sight of the distinction—all this class of agencies are not in any sense eliminators of any vice—they do not necessarily pass out of the blood, they afford to it something wanting from its healthy condition. And in this sense, *articles of food* become in the highest sense restoratives. They stand at the head of the class, and with the whole train of hygienic influences, are our first resources.

Some years ago, a distinguished fellow member of this Society read a Prize Essay to this body on *Essential Fevers*, in which he elaborated very fully and clearly the doctrine of foreign elements as the origin of certain putrid fevers. It is known that the normal condition of the blood is alkaline. Carbonate of soda is one of the healthy constituents, and recently Dr. B. W. Richardson has pretty well established the coagulability of the blood as dependent on the escape of ammonia (or its carbonate.) Now there is very fair reason to believe that typhoid fever, and

other low forms of fever, especially all that class of fevers known as "putrid fevers" are dependant on an excess of some of these alkaline elements. Thus, for example, Dr. Blair has shown that in the yellow fever there is an excess of the alkali of the blood, and that this alkali is the ammonia. At any rate, therapeutically there it no doubt but acids are of marked service as remedies in the treatment of these fevers, as the empirical experience of the profession ascertained long ago. More than a hundred years ago (in 1750,) Huxham recommended the mineral acids in the treatment of "putrid crasis" in fevers. And in our time a favorite treatment of scarlatina is the administration of nitric acid.

There is some dispute whether the acid of the gastric juice be the hydrochloric or lactic, the former is generally supposed. Now in many cases of weak digestion the administration of an acid has acted as a stimulous or promoter of the function. The explanation seems to be that a larger amount of acid is set free in the blood, thereby counteracting the failure of gastric secretion upon which these dyspeptic conditions depend. For similar reasons some forms of diarrhœa are relieved by acids.

Similar processes of reasoning are applicable to many other natural elements of the blood, and their naturally suggested restoratives, as alkalies, tonics, preparations of iron, and perhaps some other classes of agents.

"When a disease depends on the want of some material in the blood system, then it admits of being cured by a restorative. When a morbid process results in a diminution of the amount in the blood of some necessary constituent, then also may a restoration be of use in alleviating the consequences of such a disorder."—*Headland, Hœmatics.*

There is another branch of this subject, containing a proposition, to which the profession has given its assent, after some mode, through all ages; and yet for which there is even to this day no very definite demonstration, and to which there is, with many eminent authorities of medicine, the most virulent unrelenting skepticism and warfare.

It is common to ascribe to certain peculiar remedies certain important specific offices in the human economy, for example, *mercury* is, after all that has been said, still esteemed as the antagonist of syphilis; arsenic of lepra; and iodine of scrofula. We have never been able yet to say how these medicines produce their specific action, we simply know that they have the power to antagonize particular pathological conditions.

In the obscurity which has ever surrounded the *modus oper-*

andi of these and other remedies, it has been the theory to regard them as acting through the blood. That certain *materies morbi* are working in the blood, of which the vital tendency is to pass out by the gradual processes of functional elimination, and that for particular forms of foreign matters thus existing in the blood, there are respectively certain appropriate antagonizing agents. Now, we say that the demonstrations of these subtle processes are by no means clear, yet it is difficult otherwise to satisfactorily account for an extended list of phenomena in the natural history of disease and therapeutics.

In the valuable prize essay of Prof. Armor, already referred to in this paper, the class of diseases resulting from these peculiar toxic conditions of the blood are styled zymotic, and writers generally have used this term, and remedies which antagonize these poisons are spoken of as *catalytics.*

Now I say there has been some very similar way of expressing this idea from the earliest times to now. What a wonderful similarity in the old doctrines of Hippocrates, his coction or fermentation, and critical days, with the fancy of Liebig, who compares the history of these blood disorders to the process which takes place when a small quantity of yeast is introduced into a mass of malt (or sweet wort.)

Yeast, as every scientific person knows, is a vegetable fungus; placed in a solution of sugar, it undergoes rapid development, and as a consequence, alcoholic fermentation takes place, the elements of sugar arrange themselves in the new and simple forms of alcohol and carbonic acid; but in the malt there is another element, the gluten; and this gives rise to another peculiar manifestation, the yeast multiplies itself enormously at the expense of the gluten, and when the process is completed there is twenty or thirty times as much yeast as there was placed in the malt at the beginning. Now, Liebig uses this process to illustrate the events which take place when a toxic element finds its way into the blood. He believes that by some mysterious operation resembling (*not the same,*) but resembling the yeast fermentation and growth, when a portion of the poison of smallpox, or scarlatina, or diphtheria, or syphilis finds a lodgment in the blood it may so act upon the usual elements, or upon some peculiar elements of that fluid, as to reproduce itself indefinitely. To effect this reproduction, just as the yeast requires the gluten, the toxic element must have its elementary affinity present upon which to react, otherwise there is no increase, there may or may not be some disturbance of the economy, and there is by and by elimination. If the required

element be present, the process goes on, and new relations are established kindred to fermentation; in proportion to the importance of this element, as a material of tissue life and growth, will be the degree of disturbance produced; if the element is concerned in vital operations, then the toxic condition overwhelms the system and proves more or less rapidly fatal, as we are to suppose, according to the concentration of the poison.

The doctrine of typical changes so beautifully elaborated by Mr. Paget, is really only another way of expressing a similar theory. He likens the process of change which occurs in the pathological history of a typhus fever, or a small-pox, or any of those, what are styled zymotic diseases, to the changed formative process seen in a scar, or other changed tissue. A new elementary disposition has occurred, a new type, and thereafter the formative process proceeds after the new order, and hence as he supposes, the immunity thenceforth, to the influence of this toxic element if reintroduced into the blood; that is to say, the gluten type of Mr. Liebig has been destroyed and the new formative process ceases to produce it. So, too, Simon and other eminent pathologists present their special explanations of the events which we know to occur, and when analyzed, there is still the old "crisis," and "coction," and "humoral poison" of that great philosophor and physician, Hippocrates.

The pertinacity with which these ideas have retained their hold on the philosophy of medicine suggests a large degree of respectful attention, as if not absolutely true or demonstrated to be true, yet as probably on the right track.

These ideas have naturally suggested many important therapeutical views and experiments, of great value practically. The idea of a toxic condition at once suggests its antagonist; and when, on the one hand, we observe the natural history of acute rheumatism to require a definite period, expressed by Abernethy as "six weeks," to pass through its process of coction, its crisis, and its decadence, oftentimes this natural history indefinitely extended, with its incidents of chalky deposits and the like, *when undisturbed.* And on the other, when a course of alkaline medication on the plan of Mr. Fuller has arrested the process of disorder in a few days, we find it very difficult to divest ourselves of a corresponding theory.

In like manner we find very strong circumstantial evidences of toxic processes in such diseases as erysipelas, uræmic intoxication, septicemia, and the like. Exactly what blood changes have taken place in tubercle and scrofula; in putrid fevers; in the lengthy catalogue of cutaneous diseases, perhaps we shall not

be permitted to know. But the therapeutical suggestions and experiences which are accumulating in this field of inquiry are most fascinating in interest, and of the highest practical importance. It had been our purpose to embrace the consideration of some of these topics in the present paper, but the *resume* of the points already submitted have drawn more on the patience of the Society than was expected, and if agreeable, it will be my pleasure on a future occasion to prepare a supplementary paper, embracing some review of the more important topics to be considered under the general idea of *The Recent Therapeutics of Zymosis* or *Catalytic Diseases.*

CLINICAL OBSERVATIONS ON DISEASES OF THE RECTUM.

By JAMES R. LANE, F.R.C.S.,
Surgeon to St. Mary's and Lock Hospitals, and to St. Mark's Hospital for Diseases of the Rectum.

ON THE ALLEGED DANGERS OF THE LIGATURE IN THE OPERATION FOR HÆMORRHOIDS; AND THE COMPARATIVE MERITS OF THE TREATMENT BY THE CLAMP AND BY THE LIGATURE.

There is perhaps no operation in the whole range of surgery which affords so much relief at so small a cost of suffering and risk as the removal of hæmorrhoical tumors by the well-known and long-established operation with the ligature. Nevertheless there appears still to be, on the part of the public, and even of many members of the medical profession, a sort of undefined dread of ill consequences arising from it; the result of which is, that many persons are induced to linger on for years in misery and discomfort, when surgery is capable of affording them complete and permanent relief, at a risk scarcely greater than they are constantly incurring in the ordinary affairs of life.

A good illustration of what I state has been recently afforded me in the case of a young officer, who had spent some years in India, and who was suffering from the disease in its most aggravated form. It completely incompacitated him for his duties, and compelled him to return to this country for treatment. When I saw him he had been here more than a year, but had nothing done, because he had been told by a physician of eminence, whom he consulted, that it would cost him his life if he allowed himself to be meddled with. He was otherwise in fair health, and could discover nothing in his case to contra-

indicate an operation. I therefore persuaded him to submit, and the consequence was that he recovered without any untoward symptom, and was quite well at the end of a fortnight.

I have no doubt that to the existence of this vague impression might be traced the introduction of nitric acid in the treatment of this disease; and now, since experience has shown this remedy to be quite inadequate to the cure of the complaint in its severer forms, and only applicable to a small and exceptional class of cases, I believe we owe to a similar cause the introduction of a new operation with a clamp and the actual cautery. This method has been persistently vaunted during the last two or three years, as affording a certain means of cure combined with a complete immunity from all those indefinite ills to which the ligature has been stated to give rise. I have no wish to depreciate this new operation, which is ingenious enough, and may, I doubt not, be found effectual, though I do not believe it to be better, and there is not a shadow of proof that it is safer, than the methods previously in use. I cannot, however, refrain from expressing my opinion that its author, Mr. H. Smith, has exceeded the limits even of parental partiality, in the way in which he has attempted to build up its reputation at the expense of the fair fame of our old and tried friend, the ligature.

The operation to which I allude is performed in this wise. The hæmorrhoidal tumors being protruded, they are seized and their basis firmly compressed with a clamp. They are then cut off, and, to prevent bleeding, the cut surface is cauterized, either with nitric acid or the hot iron, the latter having been found the more effectual. The clamp is then removed, and the cut surface, covered of course by the layer of slough produced by the cautery, is allowed to recede into its place within the rectum. Any external piles which may happen to be present are then cut away with the knife or scissors.

Shortly after the introduction of this plan of operation, we were told by Mr. Smith, in some clinical remarks, that, "admirable as was the method of treating these diseases by the ligature, it was not free from danger to life; and if the surgeon possessed some means equally effectual, and yet free from dangerous consequences, he is bound to employ them; and therefore he was glad to be able to recommend, in the strongest manner, the improved clamp," &c. Shortly afterwards, I read that by this method "the dangers of the ligature are entirely avoided." And more recently I have met with the following statement:— "It is impossible for any surgeon conscientiously to tell his patient that there is no danger whatever after the ligature; but

this may be *most truthfully stated* with regard to the operation by my improved clamp; if the most ordinary precautions are taken to prevent bleeding." Again: It is *not possible* that either tetanus or pyæmia, the two most formidable results of the ligature, can occur after this operation, because the condition which produces the former affection does not obtain—viz., the presence of and irritating substance around the nerves for several days; and pyæmia, or other inflammatory affections, will be effectually prevented by the exposed surface being deprived of its vitality, and the veins being blocked up by the cauterization." The pathological views enunciated in the paragraph last quoted are of so novel and startling a character that they impel one to ask whether tetanus has hitherto been unheard of after burns, and how long the application of the actual cautery to cut surfaces has been known to be an effectual guarantee against pæymia and "other inflammatory affections." In the interests of science, and for the credit of English surgery, I cannot help entering my protest against such reckless assertions as these, unsubstantiated as they are by a shadow of logical proof, and without even the slender recommendation of *a priori* probability to sustain them.

But what is the *real* state of the case as regards the consequences of the operation with the ligature, deducible from the experience of those who have had the largest opportunities of forming a judgment on such a matter? The following quotation from the writings of Sir B. Brodie must commend itself to everyone by its plain common sense and sound judgment. He says:—"I conceive this is not only one of the most effectual, but one of the safest operations in surgery. I should think I must have performed or seen it performed between 200 and 300 times. I saw one patient who died after the operation, in consequence of diffuse inflammation of the cellular membrane running up the inside of the gut as high as the mesentery, but that was a patient whose constitution was broken down by long-continued hæmorrhage and in whom any slight accident might have produced equally bad consequences. I saw another patient who a week after the operation, and having been quite well in the interval, had an attack of pain in the abdomen and shivering, attended with fever and died------With the exception of these two cases, I never knew any ill consequences arise. I contend therefore that the operation is as safe as any operation can be expected to be. You are not to suppose that even the slightest operations in surgery are absolutely in all cases free from every particle of danger, any more than the slightest acci-

dent. I have known two patients die after the extraction of a tooth, and I have known several die in consequence of venesection of the arm, or an accidental prick of the finger. The chance of danger from this operation is at any rate so trifling that you need not calculate upon it. If you were to calculate upon so small a chance as this, you would scarcely be able to do anything in the ordinary affairs of life." Again, what is the opinion of the leading surgeon of the northern capital, who is well known to have had had for many years a most extensive practical experience in such cases. Mr. Syme says: "I feel warranted, after very extensive employment of the ligature, to state that it may be used without the slightest risk of any serious inconvenience. Indeed, in the whole course of my practice I never met with a case which terminated fatally, or threatened to do so, when the ligature simply was employed."

My own experience of the operation with the ligature amounts now to as many as 427 cases. In the immense majority the progress towards recovery has been singularly uniform. It has been rare indeed that I have met with any untoward symptoms, or that the healing has been much delayed; and I have never seen any cause for serious alarm, except in two cases which occurred more than seven years ago, and which have already been made public. The two cases to which I allude proved fatal from tetanus. They were lodged in the same ward, and were seized with tetanus on the same day, at a time when that complaint was epidemic in the hospitals of London to a remarkable, and I believe almost an unprecedented, extent. Out of the whole number of 427 cases which I have treated, I have never seen an instance of pæymia, or erysipelas, or of diffuse inflammation. Mr. Gowlland, my colleague at St. Mark's Hospital, must have operated on as nearly as possible the same number, his appointment to that institution having been made at the same time as my own, and I know that his experience is almost identical with mine on this question. He has never met with a case of pyæmia, and has had no fatal result, excepting, strange to say two cases of tetanus, which occurred within a short time of those to which I have already referred, and were fairly attributable to the influence of the same epidemic.

Tetanus and pyæmia, as we have seen are alleged to be "the two most formidable results of the operation with the ligature." With respect to tetanus, there is no doubt it will occasionally follow this, as it will also occasionally follow every conceivable surgical proceeding. By careful search in the medical journals it would not be difficult to find cases in support of such an

allegation against almost every operation in surgery, whether small or great. But I contend that there is no evidence that the ligature of hæmorrhoids has any special liability to produce this disease, and that there is no ground whatever for the statement that the inclusion of tissues in a ligature is a more probable exciting cause than the cauterization of the same tissues with the hot iron. In point of fact, burns have long been rather unfavorably known for their tendency to be followed by tetanus; therefore, in contrasting the cautery with the ligature, the inference to be drawn is certainly not to the disadvantage of the latter. The assertion that it is *not possible* for tetanus to follow the operation with the clamp and cautery is too absurd to require refutation, and equally so is the argument that an operation is exempt from an exceptional complication like this because twenty, fifty, or even a hundred cases have not furnished an example of it.

Again, with respect to pyæmia, it is to be feared that this is an occurrence from which no surgical operation will ever be able to claim complete exemption, especially in large hospitals. But all our knowledge on the subject tends to show that it depends on the health and condition of the individual patient, and on his atmosphere and other surroundings, rather than on the nature of the operation. It will be time enough to argue against the singular theory, that a slough produced by cautery are materially different in their predisposing influence, when any reliable facts are adduced in its support.

But I am in a position to assert confidently, and on positive grounds, that the operation with the ligature does *not* possess any peculiar liability to pyæmic infection. On the contrary, the reverse according to my experience has been remarkably the case, so much so that I have long been surprised at the exemption. I have the authentic testimony of 427 cases occurring in my own practice, and reliable information of about an equal number in the practice, of my colleague, thus making a total of about 850, and out of this large number not a single instance of pyæmia has been observed.

Having now shown, I trust conclusively, that there is no ground, either in reason or fact, for the assertions which have been made in favor of the clamp at the expense of the ligature, as regards immediate danger to life, I would ask to be permitted to examine some of the other grounds on which it has been pressed into public notice. We are told by the author of the operation "that it is not only on account of its far greater safety that he practises and strongly recommends the employ-

ment of his clamp in cases of internal hæmorrhoids and prolapse, but he adopts it for the additional and important reason, that the period of convalescence after this operation is rendered so brief that the patients are enabled to be up and about their business *in one-third of the time* which is of necessity consumed after the ordinary operation with the ligature." The majority of the patients are stated to have been "moving about" in four or five days, though in some it is admitted that the convalescence was protracted over a period of a fortnight or three weeks.

I am unable to speak from direct personal experience of the comparative merits of the two operations. I have not yet employed the clamp, in consequence of a scepticism, for which I trust I shall be pardoned, with regard to its alleged extraordinary merits, and also because it appears to me to possess the disadvantage of being more painful and protracted at the time, and of being, in severe cases, by no means certainly free from a liability to hæmorrhage subsequently. This liability, indeed, is evident from Mr. Smith's account of his own cases. I have, however, had the advantage of repeatedly seeing it performed by my colleague, Mr. Gowlland, who has used it in, I believe, about twenty cases. Having witnessed most of that gentleman's operations, I can testify to the careful and complete manner in which every detail was carried out. I have seen most of these cases after the operation, I have made particular inquiry respecting their progress, and I have found that there has not been, as a rule, less pain than after the other operation, nor has the convalescence been in any degree accelerated. They have not been considered fit to be discharged from the hospital in a less time than the average of other cases. My colleague, Mr. Allingham, informs me that he has operated with the clamp and cautery on fourteen cases, and he has arrived at precisely similar conclusions. I, therefore, take the liberty of demurring to the statement that the recovery will be complete in one-third of the time, and that patients will, as a rule, be able to go about their business in four or five days.

But I must also demur to that statement for the following additional reasons:—In the great majority of cases requiring operation there is more or less redundancy of the outer skin, "external piles," requiring removal. These must be cut away with the knife or scissors, whichever operation is adopted; and the sores resulting from their removal will render the majority of patients extremely averse, from "moving about" more than they can possibly help, at the end of four or five days. But

by specific inflammation in the larynx, as there is between simple tonsilitis and scarlatina accompanied by anginose symptoms. In regard to the special pathology and treatment of diphtheria, there is yet much to be learned. To be told that it is a blood disease, or dependent upon a blood poison, affords us but little satisfaction or profit, so long as we are left wholly in the dark in regard to the nature of the morbid condition of the blood, or of the poison that is supposed to pervade it. That the blood is in a morbid condition, all the general symptoms, as well as the exudations upon inflamed surfaces, clearly attest. But is such morbid condition consequent on the introduction of some subtle poison from without, or on some primary change in the properties of the organized structures by which the processes of disintegration are altered and their products returned into the blood in such condition as to render the whole mass morbid? The latter supposition appears to me much more in consonance with all the facts belonging to the history, symptoms, and consequences of the disease than the former. That we have diphtheritic and true plastic, or pseudo-membranous, exudations in two widely different, if not opposite, conditions of the blood and vital properties, is evident from well-known pathological facts. Thus, the infant, in the first few days of its existence, if it fails to have a good supply of milk, and its nutritive processes fail to become established and active, will generally have its mouth, tongue, and fauces all covered with a white diphtheritic or curdy exudation. The adult, in the last stages of chronic disease, consumption for instance, when the tissues are wasted, and the function of nutrition nearly suspended, will often have a copious white exudation over the greater part of the mucous membrane of the mouth and fauces. Certainly, no one would regard the exudation in such cases as dependent on any extraneous poison imbibed into the blood, or upon any true plasticity of that fluid. On the contrary, it is clearly the result of an extremely asthenic condition of the system, with deficiency of such constituents of the blood as naturally retain the albuminous and fibrinous constituents in a soluble state. I believe

that the exudations in true diphtheria result from strictly analogous morbid conditions.

That the disease is decidedly asthenic in its nature, is claimed by almost all writers on the subject, and generally assented to by the profession. That this asthenic state depends on, or consists in, deficiency of certain elements of the blood, coupled with a depressed and perverted state of vital affinity, I am fully satisfied, although I am not yet prepared to point out the exact elements at fault. The exudations in diphtheria and other asthenic conditions of the system differ in four important particulars from the true plastic or pseudo-membranous exudations resulting from simple acute inflammation. First, they appear and disappear with great rapidity, often several times during the same sickness. Second, they are accompanied by a tendency to sanious and offensive discharges from, and often ulcerations of, the membranes on which they appear. Third, the diphtheritic exudation itself, as seen under the microscope, presents cells of smaller size, arranged more in rows, and more resembling pus cells or globules, than the plastic exudations of simple inflammation. Fourth, the diphtheritic exudations all tend to ultimate dissolution, while the plastic exudations of simple inflammation tend to completeness of organization, and often become permanently identified with the original tissues.

If the foregoing statements are correct, they leave no room for doubts in regard to the propriety of maintaining a clear distinction between diphtheria complicated with specific inflammation of the larynx, and simple laryngitis or inflammatory croup. They are not only diverse in their pathology, but equally so in the indications they present for remedial treatment—the one requiring tonics, restoratives, and nutrients, the other, depletives, alteratives, and abstinence.

For nearly 30 years, we have been in the habit of meeting a greater or less number of cases of acute laryngitis or croup during the cold part of every year, and we have regarded the prompt administration of an emetic, followed by leeches to the neck, mercurial alteratives, alkaline nauseants, and such agents as speedily lessen the plasticity of the blood and the morbid

sensitiveness of the solids, as affording the only reasonable hope of effecting a resolution of the inflammation, and ensuring the safety of the patient. But whoever applies the same remedies to the treatment of diphtheria, whether accompanied by exudadations in the fauces, larynx, or elsewhere, will certainly have no reason to boast of his success in restoring the health of his patients. On the contrary, in the early stage of the latter disease, we must endeavor to correct the depraved condition of the blood, increase its capacity for the absorption of oxygen, and sustain the vital affinity of the tissues by the free use of permanganate of potassa, or the chlorates of potassa and soda acidulated with hydrochloric acid, followed, in the latter stages, by the tincture of the chloride of iron, quinine, &c., with the inhalation of such vapors as tend to allay irritation of the mucous membranes, and dissolve the adherent exudations. Bland and simple nourishment must also be carefully administered throughout the whole course of the disease.

The object of this report, however, is simply to give a history of the prevalence of diseases and their connection with atmospheric and local causes, and not a discussion of their pathology or treatment. Throughout, the month of November was unusually mild and dry, and the prevalence of diphtheria and continued fevers declined both in number and severity. Hence, that month gave a gross mortality of 61 less than the preceding month. In our previous report to this Society, attention was called to the fact that we have no reliable register of the causes of death in our city. In view of expected epidemics of a certain character during the coming Spring and Summer, these statistics become of very great importance, and it is to be hoped that the Society will take immediate measures to bring about the necessary action of the city authorities.

All of which is respectfully submitted.

dent. I have known two patients die after the extraction of a tooth, and I have known several die in consequence of venesection of the arm, or an accidental prick of the finger. The chance of danger from this operation is at any rate so trifling that you need not calculate upon it. If you were to calculate upon so small a chance as this, you would scarcely be able to do anything in the ordinary affairs of life." Again, what is the opinion of the leading surgeon of the northern capital, who is well known to have had had for many years a most extensive practical experience in such cases. Mr. Syme says: "I feel warranted, after very extensive employment of the ligature, to state that it may be used without the slightest risk of any serious inconvenience. Indeed, in the whole course of my practice I never met with a case which terminated fatally, or threatened to do so, when the ligature simply was employed."

My own experience of the operation with the ligature amounts now to as many as 427 cases. In the immense majority the progress towards recovery has been singularly uniform. It has been rare indeed that I have met with any untoward symptoms, or that the healing has been much delayed; and I have never seen any cause for serious alarm, except in two cases which occurred more than seven years ago, and which have already been made public. The two cases to which I allude proved fatal from tetanus. They were lodged in the same ward, and were seized with tetanus on the same day, at a time when that complaint was epidemic in the hospitals of London to a remarkable, and I believe almost an unprecedented, extent. Out of the whole number of 427 cases which I have treated, I have never seen an instance of pæymia, or erysipelas, or of diffuse inflammation. Mr. Gowlland, my colleague at St. Mark's Hospital, must have operated on as nearly as possible the same number, his appointment to that institution having been made at the same time as my own, and I know that his experience is almost identical with mine on this question. He has never met with a case of pyæmia, and has had no fatal result, excepting, strange to say two cases of tetanus, which occurred within a short time of those to which I have already referred, and were fairly attributable to the influence of the same epidemic.

Tetanus and pyæmia, as we have seen are alleged to be "the two most formidable results of the operation with the ligature." With respect to tetanus, there is no doubt it will occasionally follow this, as it will also occasionally follow every conceivable surgical proceeding. By careful search in the medical journals it would not be difficult to find cases in support of such an

allegation against almost every operation in surgery, whether small or great. But I contend that there is no evidence that the ligature of hæmorrhoids has any special liability to produce this disease, and that there is no ground whatever for the statement that the inclusion of tissues in a ligature is a more probable exciting cause than the cauterization of the same tissues with the hot iron. In point of fact, burns have long been rather unfavorably known for their tendency to be followed by tetanus; therefore, in contrasting the cautery with the ligature, the inference to be drawn is certainly not to the disadvantage of the latter. The assertion that it is *not possible* for tetanus to follow the operation with the clamp and cautery is too absurd to require refutation, and equally so is the argument that an operation is exempt from an exceptional complication like this because twenty, fifty, or even a hundred cases have not furnished an example of it.

Again, with respect to pyæmia, it is to be feared that this is an occurrence from which no surgical operation will ever be able to claim complete exemption, especially in large hospitals. But all our knowledge on the subject tends to show that it depends on the health and condition of the individual patient, and on his atmosphere and other surroundings, rather than on the nature of the operation. It will be time enough to argue against the singular theory, that a slough produced by cautery are materially different in their predisposing influence, when any reliable facts are adduced in its support.

But I am in a position to assert confidently, and on positive grounds, that the operation with the ligature does *not* possess any peculiar liability to pyæmic infection. On the contrary, the reverse according to my experience has been remarkably the case, so much so that I have long been surprised at the exemption. I have the authentic testimony of 427 cases occurring in my own practice, and reliable information of about an equal number in the practice, of my colleague, thus making a total of about 850, and out of this large number not a single instance of pyæmia has been observed.

Having now shown, I trust conclusively, that there is no ground, either in reason or fact, for the assertions which have been made in favor of the clamp at the expense of the ligature, as regards immediate danger to life, I would ask to be permitted to examine some of the other grounds on which it has been pressed into public notice. We are told by the author of the operation "that it is not only on account of its far greater safety that he practises and strongly recommends the employ-

ment of his clamp in cases of internal hæmorrhoids and prolapse, but he adopts it for the additional and important reason, that the period of convalescence after this operation is rendered so brief that the patients are enabled to be up and about their business *in one-third of the time* which is of necessity consumed after the ordinary operation with the ligature." The majority of the patients are stated to have been "moving about" in four or five days, though in some it is admitted that the convalescence was protracted over a period of a fortnight or three weeks.

I am unable to speak from direct personal experience of the comparative merits of the two operations. I have not yet employed the clamp, in consequence of a scepticism, for which I trust I shall be pardoned, with regard to its alleged extraordinary merits, and also because it appears to me to possess the disadvantage of being more painful and protracted at the time, and of being, in severe cases, by no means certainly free from a liability to hæmorrhage subsequently. This liability, indeed, is evident from Mr. Smith's account of his own cases. I have, however, had the advantage of repeatedly seeing it performed by my colleague, Mr. Gowlland, who has used it in, I believe, about twenty cases. Having witnessed most of that gentleman's operations, I can testify to the careful and complete manner in which every detail was carried out. I have seen most of these cases after the operation, I have made particular inquiry respecting their progress, and I have found that there has not been, as a rule, less pain than after the other operation, nor has the convalescence been in any degree accelerated. They have not been considered fit to be discharged from the hospital in a less time than the average of other cases. My colleague, Mr. Allingham, informs me that he has operated with the clamp and cautery on fourteen cases, and he has arrived at precisely similar conclusions. I, therefore, take the liberty of demurring to the statement that the recovery will be complete in one-third of the time, and that patients will, as a rule, be able to go about their business in four or five days.

But I must also demur to that statement for the following additional reasons:—In the great majority of cases requiring operation there is more or less redundancy of the outer skin, "external piles," requiring removal. These must be cut away with the knife or scissors, whichever operation is adopted; and the sores resulting from their removal will render the majority of patients extremely averse, from "moving about" more than they can possibly help, at the end of four or five days. But

where the outer skin is not inflamed or redundant, and does not require to be interfered with, but the disease is altogether internal, and the parts admit of being resorted to their natural position with the sphincter, as soon as the operation is concluded,—in such cases, I contend, the patient will be quite as well able to "move about" after the one operation as after the other. Whether it is prudent to allow him to move about is another question. I am strongly of opinion that it is not; indeed in private practice I not unfrequently find it necessary to repress the tendency to do so, because I believe that where there are large sloughing sores in the interior of the rectum (whether produced by ligature or cautery it cannot matter one straw) it is of the first importance that rest and the recumbent position should be observed, at all events until healthy granulation has commenced. If this salutary rule is largely departed from, I venture to predict that untoward results will soon become more frequent, whether the operation be performed by the clamp or by the ligature.

But it has been also alleged as an argument against the ligature and in favor of the clamp, that sometimes "the wounds resulting from the separation of the ligatures would not heal up for a long period, and the patient would be subjected to much painful suffering, necessitating, perhaps, some other operation." According to my experience, cases of this kind are very uncommon, though I admit, of course, that they may occur; indeed, after any operation, out of a large number of cases, delay and obstinacy in the healing process must always be occasionally met with; but I would ask, on what conceivable surgical principle should such a result not be equally likely to follow the operation with the clamp and cautery. Wounds made with the cautery, on the outside of the body at all events, have never been noted for any peculiar rapidity in cicaterization.

I repeat that I have no desire to depreciate the operation with the clamp. I believe it to be a sufficiently effectual method of removing the disease, but I consider it to be in many respects inferior, and in no respect to have the advantage over, the operation with the ligature. It is, in truth, only another mode but a less certain and complete mode, of doing the same thing. I admit, however, that it is an immense step in advance over the treatment by nitric acid, with which the name of its author was some years since so much identified. I should never have thought of saying a word on the subject had the new operation been left to stand upon its own merits,

and had not comparison, which I consider to be unjustifiable and unfair, been made between the two operations. I should be delighted to welcome any *real* improvement in the treatment of this disease, but I cannot admit that this is likely to be effected by the clamp. On the other hand, I consider that the operation with the ligature has done incalculable service to humanity, and my belief is that it will continue to do so long after the clamp, like many other ingenious novelties, has been laid aside and forgotten.

In conclusion, I would add a few words respecting the best mode of operating with the ligature. The plan which I invariably adopt is that invented by Mr. Salmon, which is, in my opinion, far superior to any other. By means of it most of the objections which can fairly be urged against the ligature are obviated. The hemorrhoidal tumors being protruded, they are seized in succession with a hook or vulsellum, and are separated with the scissors from the subjacent parts, along the line of union between skin and mucous membrane. The cut made with the scissors should be sufficiently deep and free to detach the tumor from the muscular tissue on which it rests to an extent equal to about three-fourths of its base, leaving it attached by its upper fourth only. The ligature is placed in the deep groove thus made, and is tied tightly round the upper attached part. The danger of hemorrhage is securely provided against, because the vessels which supply the tumor do not enter it indiscriminately at its base, but descend from above beneath the mucous membrane, and their trunks are therefore necessarily included in the ligature. When the ligatures have been tied, the bulk of the tumors may be cut away, care being taken to leave sufficient tissue beyond the ligature to prevent it from slipping, and the parts may then be returned within the sphincter. Any redundancy of external skin which is apparent *after the parts have been returned* must be cut off with the scissors. This plan of operation is far preferable to the usual method of strangulating the whole base of the tumor by transfixing it with a needle, and tying it in two halves—first, because it is completed in less than half the time; secondly, because scarcely more than one-fourth the amount of tissue is strangulated by the ligature—indeed the ligature need not include much more than the trunks of the vessels supplying the tumor; thirdly, because the ligature is tied round mucous membrane at some distance from the anus, where the sensibility is much less acute, and consequently the after pain and irritation are very greatly diminished. Instead of the whole attached base of the tumor being

converted into a sloughing wound, as when the whole of it is included in the ligature (and equally, I might add, when the whole of it is burnt with the hot iron,) three-fourths of it is made into a simple incised wound with the scissors, and the sloughing process is confined to the upper fourth only.—*London Lancet.*

EXTRACTION OF HARD CATARACT.

By GUSTAVUS HAY, M.D.

Read before the Boston Society for Medical Improvement, and communicated for the *Boston Medical and Surgical Journal.*

The operation of extraction of cataract, even in cases in which the amount of success expected is sufficient to decidedly indicate the operation, presents considerable variety both as to the facility with which it is effected and as to its results. In conjunction with cataract the eye may be variously diseased and so altered that the lens may not slip out in the usual manner, and apart from the contingencies of the healing period the improvement in vision may be less than it would have been had the cataract been the only disease. We must not, however, attribute to disease in the eye what may be due to defect in the operation. Slight variations in the movement of the instruments, such as may very easily occur, become of considerable importance, owing to the minuteness of the parts, and may influence the result more or less favorably.

In illustration of the above, I have selected the following cases:—

Case I.—Mrs. E., American, æt. 57, healthy, entered the infirmary Oct. 2d, 1864. The right eye had begun to get dim three years previously; the cataract was apparently hard, and now nearly ripe. The left was noticed to be dim a year previously; its cataract also hard, but not quite ripe.

Oct. 5th.—The ordinary flap-extraction, downwards, was done on the right eye, without ether.

10th.—Patient sitting up.

18th.—Yesterday complained of slight pain. The pupil a little smaller than in the other eye. Atropine instilled.

31st.—Wound well healed. Pupil opposite the middle of the cornea, and nearly round in form. With convex 4, vision at twenty feet $\frac{1}{2\frac{1}{2}}$.

Nov. 1st.—With convex $3\frac{1}{2}$, vision is $\frac{1}{2}$.

Here we have a case which, with the exception of the slight irritation recorded Oct. 18th, proceeded without any disagreeable circumstances and resulted successfully; so that a month after the operation the patient could leave the infirmary, well. But such a favorable state of things is not the rule, at least not without numerous exceptions.

Case II.—Mrs. T., American, æt. 73, entered the infirmary Oct. 6th, 1865. Sight began to fail in the left eye four years ago, with pain, which had recurred at times ever since. The right began to fail half a year after the other. Patient now sees with each eye, large objects. Each lens is somewhat opaque in parts throughout, and shows a well-defined, small nucleus. Tension of eyes not increased.

Oct. 9th.—Iridectomy was done upwards on the left eye.

23d.—Under ether, an upper section of moderate size was made at the boundary between cornea and sclerotic, in the expectation that the small nucleus would easily pass out; but, after opening the anterior capsule, the lens refused to start. The section, though slightly smaller than usual, was yet thought to be sufficiently large. Some other method than the usual one must, then, be adopted. Schuft's spoon, it was thought, would endanger, by its too great size, a rupture of the hyaloid. Critchett's vectis spoon was preferred; but owing to its flatness, it had previously occurred to me that it would bring along the lens better if modified by the addition of a small oval opening, into which the convexity of the posterior surface of the lens might settle a little. Such an opening, 2 lines long and 1½ lines broad, had therefore been made in the middle of the bowl of the spoon, the long axis of the opening coinciding with that of the spoon. This fenestrated spoon was introduced behind the lens, and with it the greater portion of the lens brought out without losing any vitreous. It was noticeable that, notwithstanding the appearance of a well-defined, small nucleus before the operation, yet after extraction the nucleus adhered rather firmly to the cortical portion.

Nov. 1st.—Some pain last night, and redness to-day.

13th.—Pain and redness have been considerable, but now diminishing. Sight improving.

21st.—Pain nearly gone; only slight redness remaining; with convex 3½, has vision 1-10 at ten feet.

As causes for the lens not slipping out easily, Stellwag mentions a flap too small, or a section carried too flat through the cornea, a spasmodic contraction of the sphinctor pupillæ and posterior synechiæ. He does not mention an unusual degree

of adhesion between lens and capsule, which may have existed in the case just reported. As to the requisite of the section, he says:—"A section of half the circumference of the cornea is never necessary, even for large nuclear cataracts; it suffices to enter and come out somewhat under the horizontal diameter of the cornea, and to carry the knife so that the outer edge of the flap may be all along about a-quarter of a line distant from the limbus conjunctivalis. If the nucleus is small and the cortical softened, or even if the nucleus be somewhat larger, but of normal consistency, a flap is sufficient whose extent exceeds only a little a-third of the circumference of the cornea." This last is not strange if we remember that the average diameter of the lens, is four lines, and that of the cornea five lines; so that an arc of a-third of the circumference of the cornea would have a chord slightly greater than the diameter of the lens. Some additional length is generally wanted on account of the thickness of the lens.

Case III.—Mrs. T., æt. 68, American, in feeble health, entered the infirmary May 13th, 1864, with cataract of the left eye. Iridectomy was done upwards on the 14th. Patient left on the 6th of June, doing well.

Aug. 19th.—Came back. Since leaving has been ill some of the time, but better for the past six weeks. The right eye shows some lenticular opacity and small floating opacities in the viterous.

22d.—More than three months after the iridectomy, extraction was done upwards (under ether). Nucleus small.

25th.—Some pain. Lids very slightly swollen. Some conjunctival injection. Pupil dilated by yesterday's atropine. Compressive bandage continued. Atropine instilled. Weather very warm. May sit up.

27th.—Five days after operation. Conjunctiva somewhat swelled. Pupil dilated; its aperture in part of a cloudy, creamy hue. Compressive bandage omitted.

29th.—About the same, except appearance of pus in anterior chamber. Pain at times severe.

Sept. 10th.—Nineteen days from the operation. Œdema of upper lid increasing. For several days pus has shown itself near the aperture in the iris made by the iridectomy. Pupil still dilated.

27th.—Inflammation diminished. Occasional pain. Cornea slightly opaque. Pupil nearly closed. Opaque substance blocking up the artificial pupil and the natural one. Tension of globe diminished.

Oct. 2d.—Movable reddish fluid in anterior chamber. Tension much less than normal.

4th.—Patient left.

25th.—Came back. Tension restored somewhat. Reddish fluid absorbed. Cornea clear, except above in neighborhood of section. Pupil occupied by a whitish membrane.

Nov. 28th.—Iridectomy downwards and inwards.

Dec. 15th.—With convex 3½, has vision 1-10 at ten feet.

1865, Oct. 6th.—Vision about the same, though on trial not quite as good as Dec. 15th, 1864.

This case is interesting as showing how tedious may sometimes be the inflammatory process after extraction, and also that notwithstanding very unpromising symptoms a useful amount of vision may sometimes be obtained. In consideration of the above case and of another similar one, in which the inflammatory mass occupying the pupil seemed continuous on the one hand with the edges of the artificial pupil, and on the other with the corneal section, the question occurred whether the inflammation might not be aggravated by the presence of this artificial pupil. Is it possible that this pupil, by allowing the inflamed lens-remnants to come in contact with the corneal section thereby promotes the transference of the inflammation from one to the other, or that the edges of the artificial pupil take on inflammation more readily than the rest of the surface of the iris? However, if we consider the morbid process in the two cases referred to as consisting in great part of inflammation of the portion of the lens remaining behind after extraction, it must be remembered that by means of the artificial pupil the extraction of the soft part of the lens is much facilitated. Setting this advantage of the iridectomy against the possible disadvantage referred to, there would still be reasons for considering flap-extraction preceded at an interval of some weeks by iridectomy as in general the easiest and safest method for ordinary hard cataract, inasmuch as by this method, with comparatively slight danger of rupturing the hyaloid, the removal of the lens is facilitated, and for a given amount of pressure on the eye a somewhat smaller section would suffice, and also rapid union is promoted. If the patient were quite infirm or restless, we might substitute for the usual section a smaller one of about a-third of the circumference of the cornea, and bring out the lens with the aid of the spoon, setting the advantage of the smaller section over against the danger from the use of the spoon.—*Boston Med. & Surg. Journal.*

OF THE TREATMET OF CROUP BY THE INHALATION OF LIME-WATER.

M. Kuchenmeister, of Dresden, has stated that diphtheritic membranes are rapidly dissolved in lime-water; and this statement has been confirmed by M. Biermer, the Professor of Clinical Medicine in the University of Berne, who has repeated the experiment before the students of his class.

The *Brit. For. Med. Chir. Review*, says that some pseudo-membraneous exudations, of considerable extent and thickness, were placed in a small glass of lime-water, and in the space of from ten to fifteen minutes, and before the eyes of the students, they disappeared, leaving only a very slight sediment at the bottom of the glass. M. Biermer was therefore induced to apply the lime-water locally in a living patient, and he has published the results, which were quite satisfactory. The patient was a girl, aged seventeen, admitted into the hospital of Berne for croup, which has lasted four days. When she was admitted, she was nearly choked, cyanotic, and insensible, and she threw up portions of membrane only by means of the administration of some very strong irritant medicines. The symptoms of laryngeal constriction still continued, together with distressing dyspnœa; and pulverized water was employed to moisten the respiratory passages. The water employed, which was at first hot, and then boiling, produced considerable amelioration; and M. Biermer, having previously tried the experiment mentioned above, with the false membrane and lime-water, supplied the pulverizer with lime-water. The improvement was evident as soon as the inhalations were commenced; the expectoration changed its character, and became purulent; the cough gradually disappeared, and the fever abated; and only hoarseness and a slight cough remained during the convalescence, which terminated in a complete cure. M. Biermer, and all those who watched the progress of the case, were convinced that the inhalations had a solvent effect upon the false membranes; but the professor does not recommend an exclusive adoption of this local treatment, which softens and detaches the exudations, but does not reach the cause of the disease, which must be combatted by constitutional remedies, calomel being considered the chief. The plan of M. Biermer has been followed by other practitioners; and M. Kuchenmeister has published a case of diphtheritic pharyngo-laryngitis in a child of three years and a-half old, treated in the same manner with complete success. Dr. Brauser, of Ratisbon, has also lately published a case of croup in a

child of four years and a-half old, treated in the same manner, and perfectly cured. M. Biermer insists particularly on the necessity of using the injections hot.—*Buffalo Med. & Surg. Journal.*

ANÆSTHETICS.

An anonymous writer, in a communication to the *Boston Medical and Surgical Journal* (September 7), asserts the safety of *inhalations of nitrous oxide*, for producing anæsthesia, and, objecting seriously to its indiscriminate use by ignorant and unskilled (dental?) practitioners, urges a trial of it by professional men.

"When properly prepared and properly administered, we cannot but regard it among the safest of inhalants. That prepared by ourselves we have inhaled to entire anæsthesia *one hundred and ten* times during the past ten months, with a very perceptible improvement in our general health, while we have given this gas to others for sanitary and anæsthetic objects some three hundred times in the same period; and in no single instance do we remember meeting with the least unfavorable result. In certain dental establishments in this city, it is almost, if not entirely, used for anæsthesia. The proprietor of one of these recently stated to us that it had been employed by him for anæsthesia in nearly eight thousand cases, with not a serious result.

"But by some it is urged that, while perphaps safe for brief anæsthesia, this cannot be predicated of the gas in protracted operations. In at least three instances, we have known entire anæsthesia maintained during surgical operations lasting from four to seven minutes, with the most happy effects on awakening. Others assure us of success with this in cases of anæsthesia much more protracted. From what we have heard and witnessed ourselves, we have reason to believe that entire insensibility to pain may be safely maintained for a longer period than with ether or chloroform. This may be inferred from the vitalizing character of nitrous oxide, which maintains the temperature and pulse by oxidizing the blood, while it is well known that the effects of ether, or more particularly chloroform, are the reverse of this.

"To be safe, nitrous oxide, like chloroform, should be properly made and administered. In making this gas, we employ an automatic regulator of the heat, confining the nitrate of

ammonia in the flask to a temperature scarcely above 400 degrees. The results of decomposition at this point are quite different from those where the heat of the salt is fluctuating, rising at times to 500 degrees, and even to 600 degrees, as is common by the ordinary process of heating. Thus prepared, the gas in its passage to the gas-holder is forced through five one-and-a-half-gallon glass washers, filled with an alkaline solution and pure water; each washer being provided with perforated glass tubes for finely dividing and washing the gas. Thus five distinct plunges are made through as many feet of water, when the gas is passed into a zinc receiver, where it is confined over water. This whole process is simple, safe, and economical.

"For inhaling we employ an improved valved apparatus, drawing the gas directly from the zinc holder and exhaling into the open air. With this arrangement perfect anæsthesia in its most agreeable form may be produced, while even the most sensitive suffer not the least inconvenience."

Dr. Nunneley, of Leeds, brings forward two new anæsthetics as substitutes for chloroform, the *bromide of ethyl* and the *chloride of olefiant gas*, each of which he believes to possess important advantages over chloroform. They both act speedily, pleasantly, and well. The patient might be kept insensible for any length of time, while the most painful and prolonged operations were being performed. No disagreeable symptoms had in any case, resulted from their use. The original difficulty and cost of their manufacture has been overcome, and, should their use become general, they can be made at a cost not exceeding that of chloroform, if not at less. (*Amer. Jour. Med. Science, October, from Medical Times and Gazette,*) *and St. Louis Med. Journal.*

CHOLERA AND OZONE.

To the Editor of the Lancet.—Sir,—In *The Times* of Aug. 26th and 30th, there are two letters on "Cholera and Ozone," in which directions are given for the production of ozone by the use of phosphorus, and the latter is recommended as a disinfectant. I beg to state that for upwards of seventeen years I have used phosphorus for producing ozone, and for five years I have used it as a disinfectant.

In a paper "On the Luminosity of Phosphorus in connection with Atmospheric Conditions," which I read at the Cambridge meeting of the British Association in 1862, I stated that phos-

phorus was a valuable disinfectant, but that it was effective only during its luminous condition, as ozone is formed only when it is luminous.

The luminosity and non-luminosity of phosphorus are influenced by atmospheric conditions. High pressure, a low degree of temperature, and wind from the north points of the compass are the conditions of non-luminosity; and low pressure, high temperature, and wind from south points of the compass are the conditions of luminosity. The former atmospheric conditions are those of cholera periods, and cholera disappears with the setting in of the latter.

About the 1st of September, 1853, cholera appeared in Newcastle. On the 20th the number of deaths was—cholera, 108; diarrhœa, 10. On the the 19th the south, or ozoniferous, current of the air set in and continued. On the 28th the number of deaths reported in *The Times* was—cholera, 18; diarrhœa, 2. From the 1st of September to the 19th the mean quantity of ozone was scarcely 1-0 of my scale; but from the latter date to the end of the month it ranged from 3 to 8 daily. The epidemic in London, in 1854, disappeared with the setting in of similar atmospheric conditions.

For purifying apartments I use phosphorus in the following way:—I take a quart bottle with a wide mouth, into which I put rather more than half a pint of water; a piece of cork carrying a flat piece of phosphorus with a clean cut surface, floats upon the water. The mouth of the bottle is loosely covered with a cork. The bottle is then placed, first in one part, and then in another, of the apartment to be purified until the peculiar smell of ozone is detected, or until my test papers indicate 1· of my ozone scale. The process of purifying may be performed night and morning, or oftener. For purifying air in the neighborhood of street gratings or in sewers, I simply suspend a piece of phosphorus from the grating. In appartments the temperature may be sufficiently high to keep phosphorus luminous under all atmospheric conditions; but in sewers it will be luminous and non-luminous according to the height of the barometer, the temperature of the surrounding air, and the direction of the wind, and ozone will be produced only when it is luminous. I am, Sir, your obedient servant,

—*London Lancet.* T. MOFFAT, M.D.

Book Notices.

THE PRACTICE OF MEDICINE. By THOMAS HAWKS TANNER, M.D., F.L.S., Member of the Royal College of Physicians, &c., &c., &c. From the Fifth London Edition; enlarged and improved. Philadelphia: LINDSAY & BLAKISTON. 1866.

This is a new edition of a work which has been long enough before the profession to be well known. The present edition, however, is so much enlarged as to have much the appearance of a new work. It is a full-sized octavo volume of 835 pages, printed on good type and paper, and substantially bound. The author writes in a plain, concise, and agreeable style; and most of his observations in relation to the nature and treatment of diseases, are characterized by good sense and extensive research. As a manual, or text-book, for the use of students, while in attendance at the medical colleges, it would be both convenient and useful, but it is too brief to constitute a satisfactory treatise on the science and practice of medicine. For instance, the consideration of the whole class of idiopathic fevers is compressed into the short space of 42 pages, while more than 100 pages are occupied by an appendix of formulæ. Still the volume is well worth a place in the library of the practitioner.

For sale by W. B. KEEN & Co., 148 Lake Street, Chicago.

CHLOROFORM: ITS ACTION AND ADMINISTRATION. By ARTHUR ERNEST SANSOM, M.B., London, late House Physician and Physician-Accoucheur's Assistant to King's College Hospital. Philadelphia: LINDSAY & BLAKISTON. 1866.

This is an American edition of a new English work, on a very interesting and important subject. It is a small-sized octavo volume, containing 279 pages, published in fair style. The work is divided into twenty chapters, with the following titles:

I. The Discovery of Chloroform. II. The Influence of the Discovery. III. The Chemistry of Chloroform. IV. The Effects of its Inhalation. V. The Physiological Action of Chloroform and its Allies. VI. The Action of Chloroform and Anæsthetic Agents, &c., upon the Blood and the Circulation—their *modus operandi*. VII. The Danger of Chloroform, and

the Circumstances which modify it. VIII: Diseased Conditions which increase the Danger of Chloroform. IX. The Dangers of the Incautious Administration of Chloroform. X. Signs of Danger under the Influence of Chloroform. XI. Nature and Mode of Death from Chloroform. XII. Resuscitation in Apparent Death from Chloroform. XIII. Resuscitation, Practical Details, Summary. XIV. Methods of administering Chloroform. XV. Practical Rules for the Administration of Chloroform. XVI. On Anæsthetic Mixtures. XVII. Chloroform in Surgery. XVIII. Chloroform in Obstetric Practice. XIX. Chloroform in Practical Medicine. XX. Chloroform in Dentistry.

From this table of contents, our readers will readily infer the general scope of the work, as well as the special topics discussed. The author is an enthusiastic advocate of the use of chloroform in preference to other anæsthetic agents. Although, in a hasty perusal, we find many items in reference to which we should dissent from the author's views, yet both students and practitioners will find a careful reading of the work both pleasant and profitable.

For sale by W. B. KEEN & Co., 148 Lake St., Chicago.

ON THE DISEASES, INJURIES, AND MALFORMATIONS OF THE RECTUM AND ANUS; WITH REMARKS ON HABITUAL CONSTIPATION. By T. J. ASHTON, formerly Surgeon to the Blenheim Dispensary; Fellow of the Royal Medico-Chirurgical Society; Member of the Pathological Society of London, &c., &c. With Illustrations. Second American, from the Fourth and Revised English Edition. Philadelphia: HENRY C. LEA. 1865.

This is a new and carefully revised edition of one of the most valuable special treatises that the physician and surgeon can have in his library. It is a full-sized octavo, of 267 pages. The following important topics are pretty fully and practically considered, viz.:—Irritation and Itching of the Anus; Inflammation and Excoriation of the Anus; Excrescences of the Anal Region; Contraction of the Anus; Fissure of the Anus and Extremity of the Rectum; Inflammation of the Rectum; Ulceration of the Rectum; Hæmorrhoidal Affections; Enlargement of Hæmorrhoidal Veins; Prolapsus of the Rectum; Abscesses

near the Rectum; Fistula in Ano; Polypi of the Rectum Stricture of the Rectum; Malignant Diseases of the Rectum; Injuries of the Rectum; Foreign Bodies in the Rectum; Malformations of the Rectum; and Habitual Constipation.

For sale by W. B. KEEN & Co., 148 Lake St., Chicago.

THE PRINCIPLES OF SURGERY. By JAMES SYME, F.R.S.E., Surgeon in ordinary to the Queen, in Scotland; Professor of Clinical Surgery in the University of Edinburgh; Member of the General Medical Council, &c., &c., &c. To which are appended his treatises on "The Diseases of the Rectum;" "Stricture of the Urethra, and Fistula in Perinæo;" "the Excision of Diseased Joints," and numerous additional contributions to the pathology and practice of surgery. Edited by his former pupil, DONALD MACLEAN, M.D., L.R.C.S.E., Professor of the Institutes of Medicine, and Lecturer on Clinical Surgery, Queen's University, Canada. Philadelphia: J. B. LIPPINCOTT & Co. 1866.

This is a full-sized octavo volume of 880 pages, published in excellent style. The author is well-known as one of the ablest and most distinguished surgeons in Europe. This treatise on the "Principles of Surgery" occupies the first 524 pages of the present volume. The remaining 356 pages are occupied by an appendix essays on "Diseases of the Rectum;" on "Stricture of the Urethra, and Fistula in Perinæo;" on "Excision of Diseased Joints;" on "Excision of the Scapula and Tongue;" and clinical observations on various surgical topics and cases. The surgical part of the profession, especially, will thank the editor and publishers for giving us this very valuable addition to the list of surgical works.

For sale by S. C. GRIGGS & Co., Lake St., Chicago.

ON WAKEFULNESS. With an Introductory Chapter on the Physiology of Sleep. By WILLIAM A. HAMMOND, M.D., Fellow of the College of Physicians of Philadelphia, &c., &c., &c. Philadelphia: J. B. LIPPINCOTT & Co. 1866.

This is a very neatly published little monograph of 93 pages. The substance of it was originally published in the *New York Medical Journal.* It embraces four chapters, viz.: The Physiology of Sleep; the Pathology of Wakefulness; the Exciting Causes of Wakefulness; and the Treatment of Wakefulness.

In regard to the physiology of sleep, the author regards a

diminution of vascular fulness, or circulation of blood in the brain, as the immediate or proximate cause of sleep. That sleep and stupor, instead of being analogous conditions, depend on directly opposite states of the cerebral circulation; the first being accompanied by diminished fulness of the cerebral vessels, and the latter by increased fulness.

In regard to the pathology of wakefulness, he says:—"In primary insomnia there is always an increase in the quantity of blood circulating in the brain. This is either absolute or relative."

The following are enumerated by the author, as the exciting causes of wakefulness:—

1st. Long-continued or excessive intellectual action, or any powerful emotion of the mind.

2d. Those positions of the body which tend to impede the flow of blood from the brain, and, at the same time, do not obstruct its passage through the arteries.

3d. An increased determination of blood to the brain, by certain substances used as food or medicine.

4th. Certain functional derangements of such organs as cause an increased accumulation of blood in the brain.

The therapeutic measures recommended by the author, are indicated in the two following propositions:—"1st. Those which by their tendency to soothe the nervous system, or to distract the attention, diminish the action of the heart and bloodvessels, or correct irregularities in their function, and thus lessen the amount of blood in the brain. 2d. Those which directly, either mechanically or through a specific effect upon the circulatory organs, produce a similar effect."

The views of the author, thus briefly indicated, are illustrated in his monograph by the citation of cases and the detail of experiments of a highly interesting and instructive character. We think one of the principal defects in the physiological and pathological views of the author, and, indeed, of most other writers on the same subject, arises from a disposition to attribute all cerebral phenomena to changes in, or differences of, the cerebral circulation. Too exclusive importance is attached

to the mere mechanical conditions of greater or less vascular fulness of the brain, while the properties belonging to the brain structure, such as susceptibility and vital affinity, are almost entirely ignored. To this, and some items connected with the author's views of treatment, we may recur hereafter.

The work is for sale by S. C. GRIGGS & Co., Lake Street, Chicago.

The following works have been received, and shall be noticed more fully in our next issue, viz.:—

LECTURES ON EPILEPSY, PAIN, PARALYSIS, AND CERTAIN OTHER DISORDERS OF THE NERVOUS SYSTEM. By CHARLES BLAND RADCLIFFE, M.D., Fellow of the Royal College of Physicians of London, &c., &c. Philadelphia: LINDSAY & BLAKISTON. 1866.

RHINOSCOPY AND LARYNGOSCOPY; THEIR VALUE IN PRACTICAL MEDICINE. By Dr. FRIEDERICH SEMELEDER, Physician in ordinary to His Majesty the Emperor of Mexico, Member of the Royal Medical Society of Vienna, &c., &c. Translated from the German, by EDWARD T. CASWELL, M.D. With Illustrations. New York: WILLIAM WOOD & Co., 61 Walker Street. 1866.

Editorial.

CHICAGO MEDICAL SOCIETY.—*Discussion on Diphtheritic Croup, or Diphtheria involving the Larynx.—Lime-Water Inhalation.*—At a recent meeting of the Chicago Medical Society, while the subject of diphtheria as it invades the larynx was under discussion, Dr. J. P. ROSS stated that he had recently tried the inhalation of the vapor of lime-water, as suggested by some foreign writer:—In one very strongly-marked case, in which the obstruction of the larynx was so great that the child was not expected to live more than a very few hours, the inhalation soon produced some relief, and in a few hours a considerable quantity of detached and broken shreds of diphtheritic membrane was discharged, and the child ultimately recovered. In another case, however, the relief afforded by the inhalation was only temporary, the patient dying in a few hours. If the lime-water vapor merely acts as a solvent of the diphtheritic

exudation upon the surface of the larynx and fauces, it must of necessity often fail to prevent a fatal termination in this form of diphtheria, because the dyspnœa, in many cases, arises more from the infiltration into, and consequent tumefaction of, the sub-mucous tissue at the base of the epiglottis and within the larynx, than from the amount of exudation upon the mucous surface. Still, so far as patients laboring under this much dreaded disease can be made to inhale aqueous vapor impregnated with alkalies or alkaline earths, it will, undoubtedly, aid materially in disintegrating the diphtheritic exudations, and, thereby, prove a valuable aid to other appropriate treatment. But it must not be forgotten that diphtheria is not a mere local disease of the larynx or fauces, but involves the whole system, depressing the vital properties and impairing the quality of the blood. Consequently, mere local applications of any kind cannot meet all the plain indications for treatment.

Illinois State Medical Society.—As the next annual meeting of the American Medical Association is to be held in Baltimore on the first Tuesday in May next, it will be necessary to hold the next meeting of our State Society on the first Tuesday in June. We hope the Committee of Arrangements at Decatur will remember this. As this brings the meeting of the State Society one month after that of the American Medical Association, the delegates to the latter, appointed last year at Bloomington, will hold their appointments for the coming meeting in Baltimore also.

The names of the delegates are as follows, viz.:—A. L. McArthur, M.D., of Joliet; L. T. Hewins, M.D., of Loda; J. W. Redden, M.D., of Shawneetown; J. M. Steele, M.D., of Grandview; J. S. Jewell, M.D., of Chicago; H. Noble, M.D., of Heyworth; T. F. Worrell, M.D., of Bloomington; E. L. Holmes, M.D., of Chicago; J. W. Freer, M.D., of Chicago; E. W. Moore, M.D., of Decatur; A. Niles, M.D., of Quincy; A. W. Heise, M.D., of Joliet; R. E. McVey, M.D., of Waverly; L. Clark, M.D., of Rockford; H. C. Luce, M.D., of Bloomington; D. Prince, M.D., of Jacksonville; D. Brainard, M.D., of

Chicago; W. A. Elder, M.D., of Bloomington; J. Brown, M.D., of Decatur; N. Wright, M.D., of Chatham.

We publish the names of the delegates, and call the attention of the Society to the change in the time of meeting thus early, for two purposes:—First, that all parties shall fully understand that the order of meeting for the state and national organizations for this year is reversed; the American Medical Association meeting at Baltimore, on the first Tuesday in May, and the Illinois State Medical Society, at Decatur, on the first Tuesday in June.

Second, that the delegates may have ample time to make their preparations to attend the meeting of the Association; and such of them as know they cannot attend, should inform the Secretary early, that substitutes may be selected.

Cook County Hospital—The Board of Supervisors of this county, under whose care is placed the interests of the poor of this city, has finally completed the arrangements for opening a public hospital for the sick poor of the city and county. It will occupy the building well known as the *City Hospital*, between 18th and 19th Streets. The following are announced as constituting the medical and surgical staff of the hospital, viz.:—*Attending Physicians*, Thomas Bevan, M.D., J. P. Ross, M.D., and H. W. Jones, M.D. *Attending Surgeons*, Geo. K. Amerman, M.D., R. A. Bogue, M.D., and Chas. G. Smith, M.D. *Consulting Physicians*, H. A. Johnson, M.D. and R. C. Hamill, M.D. *Consulting Surgeons*, J. W. Freer, M.D. and Wm. Wagner, M.D. *Pathologist*, Henry M. Lyman, M.D.

These are all excellent appointments, and we hope such regulations will be adopted by the Board of Supervisors as will prevent their being disturbed by the results of each annually recurring political election.

Revival of Medical Periodicals in the South.—In our last issue, we noticed the promised appearance of a medical journal in Richmond, Va., and at Memphis, Tenn. Since then we have received notices that the *New Orleans Medical and*

Surgical Journal will be revived under the editorial management of Dr. BENNETT DOWLER, well known to the profession as an able writer; and that the publication of medical journals will also be resumed at Atlanta, Ga., and Charleston, S. C. We are also informed that a new medical periodical is about to make its appearance in New York City, to be published by WM. WOOD & Co., and edited by Dr. SCHRADY.

OBITUARY NOTICE.—Pursuant to a call, the members of the medical profession of the City of Rockford met on the 21st ult., and unanimously adopted the following preamble and resolutions:—

Whereas, By the dispensation of Providence, Dr. WILLIAM LYMAN has been called from time to eternity; therefore,

Resolved, That, by the death of Dr. LYMAN, the medical profession has been bereft of one of its most devoted and noble members; society, of a true friend and benefactor; his family, of a loving and large-hearted protector; and we, his professional associates, of a friend who, by his uniform kindness of heart and geniality of manner, has won our esteem and respect.

Resolved, That we extend to the family of the deceased, our sympathy for their bereavement, and that we attend the funeral in a body.

Resolved, That a copy of these resolutions be transmitted, by the Secretary, to the bereaved family, and copies for publication, to the *Chicago Medical Journal*, CHICAGO MEDICAL EXAMINER, and the *Rockford Register*.

G. W. ROHR, *Secretary.* HENRY STRONG, M.D., *Chairman.*

PROF. DANIEL BRAINARD.—This well-known surgeon, who has occupied the Chair of Surgery in Rush Medical College, ever since the College was organized, took his departure for Europe a few days since. His family had preceded him a few months; and it is understood that they intend to remain in Europe several years.

SANITARY SCIENCE.—In an interesting introductory lecture on this subject, Dr. A. B. PALMER, Professor of Pathology and Practical Medicine, in the Medical Department of the Univer-

sity of Michigan, gives the following encouraging statistics, in relation to the effects of sanitary improvements on health and mortality:—

In the whole of England and Wales a registration of births, marriages, and deaths is now, and has for a considerable time, been carefully, and, in the main, accurately kept; and in several municipalities, such records have been kept for a long period. From these, we learn that with the advancement of science and civilization, the annual percentage of mortality has gradually diminished, and at the present period the chances of life are better than ever before. Astonishing changes in particular localities have been effected by the removal of nuisances, and by improvements in drainage, in pavements, and in the construction of dwellings and the like—these improvements more particularly affecting the towns and the poor. Now, whenever in any locality the death rate rises much above the average, as ascertained by the reports sent to the Register-General's Office in London, enquiry is made into the cause, and when discovered, as it almost always is, measures are taken for its removal, and the death-rate falls to its usual level.

The following table from McCulloch's Statistics of the British Empire will show the progressive diminution of mortality for the last two centuries in the City of London:—

Years.	Amount of Mortality. Per Cent.
1660—35	8.000
1728—57	5.200
1771—80	5.000
1801—10	2.920
1831—35 Cholera years,	3.200
1831—41	2.522
1851—	2.340

Another table from the same work, shows the progress made during the last century in the management of children. The percentage of all the births of children dying before reaching the fifth year, was as follows:—

Years.	Percentage of deaths under five years.
1730—49	74.5
1750—69	63.0
1770—89	51.5
1790—1809	41.5
1810—29	31.8
1851	25.8

Similar changes have occurred in other countries. In France, for instance, at the close of the last century, the mean average duration of human life was less than twenty-nine years, whereas a dozen years ago it was thirty-three.

About one hundred years ago, in the imperfectly ventilated and badly managed workhouses of London, twenty-three out of every twenty-four children, born and retained in those establishments, died before attaining the age of one year. Such terrible mortality attracted the attention of Parliament; the causes were enquired into, and, by an act of that body, directing certain reforms, the mortality was immediately reduced from 95.83 per cent., to 13 per cent.—from 2,600 to 450 in a single year, thus saving 2,150 lives in those establishments alone. The present death-rate, during the first year of life, in all England, is 16.559 per cent. This act of Parliament, and the great care in management which immediately followed, reduced the mortality in the poorhouses much below the present average rate in the whole country. Human agencies seem thus to have something to do in influencing the issues of life and death.

At the present time, in the more rural districts of England, where the children have purer air and better attention, of all under five years, the annual death-rate is about 4 per cent.—or 40 in 1000; while in East London, Sheffield, Coventry, Leeds, and other similar places, it is over 10 per cent. In Manchester, a crowded manufacturing city, it is 11.7 per cent., and in Liverpool, a crowded, filthy seaport, it is 13.198 per cent., or 131.98 in 1000.

The mortuary statistics of our own country have been but imperfectly kept. In many of the states—in our own state, though so far advanced in the means of education, and in so many other respects, there is no general law on the subject of registration, and we have no authoritative means of knowing the proportions that are living or dying. This is a reproach, which, it is to be hoped, will soon be wiped away. In most of the cities throughout the country, records are kept, and we find these records showing, among others, the following facts in 1863:—

Place.	No. of deaths to each thousand of population.
New York,	27.0
Philadelphia,	23.1
Boston,	24.0
Newark, N.J.,	22.9
Providence, R.I.,	22.7
Hartford, Conn.,	18.2

In most rural districts the percentage of deaths is still smaller, and might be much further reduced if all the hygienic laws were obeyed. In New York, about 25,000 die annually. If the laws of health were obeyed as well, and no better, than in many rural districts, the deaths would not be more than 15,000. It thus appears that, at least, there are over 10,000 unnecessary deaths in that city. To every death there is estimated to be twenty cases of sickness, and for these 10,000 unnecessary deaths, there are 200,000 cases of unnecessary sickness. Each case of sickness is estimated to cost on an average, in loss of time, in medical attendance, and nursing, about $50. Now, the 200,000 cases of preventable sickness, multiplied by the number of dollars each costs, would give us $10,000,000 as the result. This vast sum of ten millions of dollars is annually spent in this one city for unnecessary sickness. But this is almost unworthy of mention in comparison with the bodily and mental suffering thus needlessly endured.

In whatever aspect this subject is viewed, its magnitude and importance surprise us; and the indifference with which it is treated by most men surprises us more.

Notwithstanding all these facts—the changes in the bills of mortality effected by changes in the habits of the people, and the conditions of their surroundings—permanent changes from 80 to 23 per thousand in a vast and still growing city—notwithstanding an act of Parliament reduced the mortality among the innocents in the poorhouses of London from 2,600 to 450, saving 2,150 lives in a single year, yet there is a sort of vague impression in the minds of many, that death, if not sickness, is a matter of special providence—a thing over which human agency has no control. If this be so, Gentlemen, our "occupation's gone." You may as well go home and let this department of the University be closed. These walls now devoted to science and an active humanity, should be given up to the teaching of a paralyzing fatalistic philosophy. Arabia could, doubtless, furnish a Mohammedan professor who would teach us to fold our hands in indifference, and exclaim, "Allah ruleth!" The Bible, however, teaches that, "whatsoever a man soweth that shall he also reap;" and the freedom and efficiency of human agency are everywhere taught. The fatalistic theory is as false in its application to this as to other subjects.

To the sentiments embraced in the following paragraph, from the same address, we cordially assent:—

Now, Gentlemen, of the importance of this subject of sani-

tary science—of a knowledge of its principles and a practical obedience to its precepts, no one can doubt. That this knowledge should be possessed by non-professional persons in order that its precepts be generally understood and observed, is equally evident; and it is also too apparent to require enforcing, that to professional men—to physicians, the community must chiefly look for this knowledge. It will be for you in your several stations and communities, after first obtaining it, to spread abroad your light. You should urge these subjects as branches of popular education. You should encourage and aid in the introduction of articles upon them into our periodical literature. The newspaper and the magazine—those great educators of the people, should be made channels through which this knowledge should flow abroad; and should there at any time occur within your sphere of observation any unusual sickness and mortality, it will be your duty as *guardians* of the *public health* and *teachers* of the people, to investigate the causes of such sickness with minuteness and faithfulness; and it will be in opposition to your duty to hide under a bushel your conclusions and the facts upon which they are based, for any temporary effect which the statement of such facts and conclusions may have upon either your own feelings and passing interests, or those of others. You cannot be too careful in arriving at the facts, or too rigid in your deductions from them; but when the facts have been ascertained beyond a reasonable doubt, and when your logic is without a perceptible flaw, place your light upon a candlestick, that it may yield the illumination so much needed.

FOREIGN CORRESPONDENCE.—We copy the following interesting letter from the *St. Louis Medical and Surgical Journal* for November and December:—

LETTER FROM PROFESSOR CHAS. A. POPE, M.D.

PARIS, August 27, 1865.

MESSRS. EDITORS: It has been my pleasure, for some months past, to attend weekly, at the Hospital Necker, the cliniques of M. Civiale. During this time I have seen him perform a large number of his usual operations, such as urethrotomy, lithrotripsy, and lithotomy. In the crushing of calculi he is still unrivalled. The extreme care with which he examines his cases, and the wonderful ease, delicacy, and precision which characterize his manipulations, have not diminished with his advancing years. Compliments in this respect, however, he

generally declines, preferring that his great skill should be shared by all surgeons. His wish is to see lithrotripsy practiced by the whole profession, and not confined to a few. Forty years' observation and experience in an extensive and special practice could not fail to render him thoroughly proficient in all that concerns the diseases of the urinary organs. It must be recollected that in the diagnosis of these we are deprived of the use of sight, and are guided by the touch alone. Nor is the touch direct, for it is exercised through the medium of a long, metallic instrument. One's admiration, therefore, is enhanced to see with what accuracy he appreciates the various conditions of the urethra and bladder, the presence or absence of calculi, whether free or encysted, their size, shape, hardness, and number, as well as the various tumors and polypi, their narrow or broad base, and, in short, all that concerns the pathology of these important organs. Yet, notwithstanding his ability, Civiale is always modest, and deprecates the rashness and presumption of those who claim to be absolute in their diagnosis and treatment of these difficult and often obscure complaints. The method and instruments are the same which he has employed for the last thirty years. If there be one quality which characterizes him more than another, it is gentleness. This is his great watchword. He never inflicts useless pain, never fatigues his patient, by prolonged operations, and always properly prepares them for the use of his instruments, which seem to glide of their own accord, and are of small size to admit of freer play. A favorite remark with him is, always to give the urethra time to swallow the instruments, the wisdom of which is apparent to all who are familiar with such operations. His lithrotripsycal operations are almost perfect.

In nodulated strictures he still uses his own urethrotome, which cuts, as you know, from behind forwards, or from the bladder to the penis. Sometimes he incises the urethra for seven inches in extent; but, generally, he limits the incision to the mere nodosity. He prefers to act on the posterior wall of the urethra, whilst Maissonneuve almost always cuts anteriorly. Both are careful to introduce immediately an elastic catheter, which is retained for thirty-six or forty-eight hours.

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Similar changes have occurred in other countries. In France, for instance, at the close of the last century, the mean average duration of human life was less than twenty-nine years, whereas a dozen years ago it was thirty-three.

About one hundred years ago, in the imperfectly ventilated and badly managed workhouses of London, twenty-three out of every twenty-four children, born and retained in those establishments, died before attaining the age of one year. Such terrible mortality attracted the attention of Parliament; the causes were enquired into, and, by an act of that body, directing certain reforms, the mortality was immediately reduced from 95.83 per cent., to 13 per cent.—from 2,600 to 450 in a single year, thus saving 2,150 lives in those establishments alone. The present death-rate, during the first year of life, in all England, is 16.559 per cent. This act of Parliament, and the great care in management which immediately followed, reduced the mortality in the poorhouses much below the present average rate in the whole country. Human agencies seem thus to have something to do in influencing the issues of life and death.

At the present time, in the more rural districts of England, where the children have purer air and better attention, of all under five years, the annual death-rate is about 4 per cent.—or 40 in 1000; while in East London, Sheffield, Coventry, Leeds, and other similar places, it is over 10 per cent. In Manchester, a crowded manufacturing city, it is 11.7 per cent., and in Liverpool, a crowded, filthy seaport, it is 13.198 per cent., or 131.98 in 1000.

The mortuary statistics of our own country have been but imperfectly kept. In many of the states—in our own state, though so far advanced in the means of education, and in so many other respects, there is no general law on the subject of registration, and we have no authoritative means of knowing the proportions that are living or dying. This is a reproach, which, it is to be hoped, will soon be wiped away. In most of the cities throughout the country, records are kept, and we find these records showing, among others, the following facts in 1863:—

Place.	No. of deaths to each thousand of population.
New York,	27.0
Philadelphia,	23.1
Boston,	24.0
Newark, N.J.,	22.9
Providence, R.I.,	22.7
Hartford, Conn.,	18.2

In most rural districts the percentage of deaths is still smaller, and might be much further reduced if all the hygienic laws were obeyed. In New York, about 25,000 die annually. If the laws of health were obeyed as well, and no better, than in many rural districts, the deaths would not be more than 15,000. It thus appears that, at least, there are over 10,000 unnecessary deaths in that city. To every death there is estimated to be twenty cases of sickness, and for these 10,000 unnecessary deaths, there are 200,000 cases of unnecessary sickness. Each case of sickness is estimated to cost on an average, in loss of time, in medical attendance, and nursing, about $50. Now, the 200,000 cases of preventable sickness, multiplied by the number of dollars each costs, would give us $10,000,000 as the result. This vast sum of ten millions of dollars is annually spent in this one city for unnecessary sickness. But this is almost unworthy of mention in comparison with the bodily and mental suffering thus needlessly endured.

In whatever aspect this subject is viewed, its magnitude and importance surprise us; and the indifference with which it is treated by most men surprises us more.

Notwithstanding all these facts—the changes in the bills of mortality effected by changes in the habits of the people, and the conditions of their surroundings—permanent changes from 80 to 23 per thousand in a vast and still growing city—notwithstanding an act of Parliament reduced the mortality among the innocents in the poorhouses of London from 2,600 to 450, saving 2,150 lives in a single year, yet there is a sort of vague impression in the minds of many, that death, if not sickness, is a matter of special providence—a thing over which human agency has no control. If this be so, Gentlemen, our "occupation's gone." You may as well go home and let this department of the University be closed. These walls now devoted to science and an active humanity, should be given up to the teaching of a paralyzing fatalistic philosophy. Arabia could, doubtless, furnish a Mohammedan professor who would teach us to fold our hands in indifference, and exclaim, "Allah ruleth!" The Bible, however, teaches that, "whatsoever a man soweth that shall he also reap;" and the freedom and efficiency of human agency are everywhere taught. The fatalistic theory is as false in its application to this as to other subjects.

To the sentiments embraced in the following paragraph, from the same address, we cordially assent:—

Now, Gentlemen, of the importance of this subject of sani-

tary science—of a knowledge of its principles and a practical obedience to its precepts, no one can doubt. That this knowledge should be possessed by non-professional persons in order that its precepts be generally understood and observed, is equally evident; and it is also too apparent to require enforcing, that to professional men—to physicians, the community must chiefly look for this knowledge. It will be for you in your several stations and communities, after first obtaining it, to spread abroad your light. You should urge these subjects as branches of popular education. You should encourage and aid in the introduction of articles upon them into our periodical literature. The newspaper and the magazine—those great educators of the people, should be made channels through which this knowledge should flow abroad; and should there at any time occur within your sphere of observation any unusual sickness and mortality, it will be your duty as *guardians* of the *public health* and *teachers* of the people, to investigate the causes of such sickness with minuteness and faithfulness; and it will be in opposition to your duty to hide under a bushel your conclusions and the facts upon which they are based, for any temporary effect which the statement of such facts and conclusions may have upon either your own feelings and passing interests, or those of others. You cannot be too careful in arriving at the facts, or too rigid in your deductions from them; but when the facts have been ascertained beyond a reasonable doubt, and when your logic is without a perceptible flaw, place your light upon a candlestick, that it may yield the illumination so much needed.

FOREIGN CORRESPONDENCE.—We copy the following interesting letter from the *St. Louis Medical and Surgical Journal* for November and December:—

LETTER FROM PROFESSOR CHAS. A. POPE, M.D.

PARIS, August 27, 1865.

MESSRS. EDITORS: It has been my pleasure, for some months past, to attend weekly, at the Hospital Necker, the cliniques of M. Civiale. During this time I have seen him perform a large number of his usual operations, such as urethrotomy, lithrotripsy, and lithotomy. In the crushing of calculi he is still unrivalled. The extreme care with which he examines his cases, and the wonderful ease, delicacy, and precision which characterize his manipulations, have not diminished with his advancing years. Compliments in this respect, however, he

generally declines, preferring that his great skill should be shared by all surgeons. His wish is to see lithrotripsy practiced by the whole profession, and not confined to a few. Forty years' observation and experience in an extensive and special practice could not fail to render him thoroughly proficient in all that concerns the diseases of the urinary organs. It must be recollected that in the diagnosis of these we are deprived of the use of sight, and are guided by the touch alone. Nor is the touch direct, for it is exercised through the medium of a long, metallic instrument. One's admiration, therefore, is enhanced to see with what accuracy he appreciates the various conditions of the urethra and bladder, the presence or absence of calculi, whether free or encysted, their size, shape, hardness, and number, as well as the various tumors and polypi, their narrow or broad base, and, in short, all that concerns the pathology of these important organs. Yet, notwithstanding his ability, Civiale is always modest, and deprecates the rashness and presumption of those who claim to be absolute in their diagnosis and treatment of these difficult and often obscure complaints. The method and instruments are the same which he has employed for the last thirty years. If there be one quality which characterizes him more than another, it is gentleness. This is his great watchword. He never inflicts useless pain, never fatigues his patient, by prolonged operations, and always properly prepares them for the use of his instruments, which seem to glide of their own accord, and are of small size to admit of freer play. A favorite remark with him is, always to give the urethra time to swallow the instruments, the wisdom of which is apparent to all who are familiar with such operations. His lithrotripsycal operations are almost perfect.

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witnessed, in which he but too plainly evinced his want of surgical skill.

The patient was a man about fifty-five years of age—the stone being of rather large size. No chloroform was used, and, during the protracted operation, his sufferings were very great. A straight incision was made in the median line, in front of the anus. The staff having been reached, a double *lithotome cache* was pushed into the bladder, and, the blades having been made to project, the instrument was withdrawn. With the common lithotomy forceps an attempt was made to extract the stone, but failing, resort was had to a complex apparatus for crushing, or rather disrupting, the foreign body. This consisted of a large forceps, whose strong handles were forcibly approximated by a vice, through which and the joint of the forceps a perforating instrument like a gimblet and worked by a screw was introduced against the included stone with the view of boring into it, and thus causing its disruption. After much time, labor, and suffering, the operator succeeded in breaking off and removing a portion of calculus, more than an hour having been consumed in ineffectual attempts at extraction, during which both the surgeon and patient were thoroughly exhausted; the latter was removed to his bed with the promise that the remainder of the stone would be taken from him in a few days. He died, however, on the second day, and the stone was removed after death. It constituted about two-thirds of the whole mass. When entire, it was ovoidal in shape, and would have measured about 2¾ inches in length by 2¼ inches in thickness. I have myself successfully removed a larger stone from a much smaller patient by the single laternal incision.

A worse operation I scarcely ever witnessed. Its plan was defective, as the direction of the outer and inner incisions were at right angles to each other, and its execution was unskilful. The surgeon did not give the ordinary forceps a fair trial; and if, as he said, the stone was in the bas-fond of the bladder, which closely embraced it, why did he not introduce his finger into the rectum so as to facilitate the seizure? He seemed more intent in applying a sort of perineal lithrotripsy through the wound; but, whenever this becomes necessary, it were preferable to resort at once to hypogastric lithotomy.

For his own reputation, and the good of his patients, it is to he hoped that the able lithrotriptor will not often attempt the knife, but in cases requiring its use that he will hand them over to some more skilful confrere. Civiale seems to be about seventy years old. He is followed by a small class of from ten to

fifteen students, the majority of whom are foreigners. He is said to be very wealthy, and pays, I have been told, six thousand francs a-year for his service at the Hospital Necker.

At this same hospital I have occasionally seen the application of the *endoscope* in the hands of its inventor, M. Désormeaux. Although ingenious, it does not strike me as being of much practical value. Thus far, at least, its revelations have not enabled us to treat the diseases of the urethra and bladder with any greater success so that, at present, it may be regarded as more curious than useful.

By means of a perforated mirror, placed obliquely and arranged precisely like Hutchinson's car speculum, the light of a lamp is projected through a silver tube into the urethra, the changes of whose walls we may plainly see, as also the margin of the prostate and the interior of the bladder. This last is accomplished by an angular catheter, having a small, glass window at the convexity or apex of the angle, which, whilst permitting vision, prevents the flow of urine which would obscure it. In the normal state the prostatic margin presents a crescentic shape, with the convexity posteriorly or inferiorly; if hypertrophied, this convexity is forward or superiorly. The inner surface of the bladder can be plainly seen, and the vascular ramifications on a whitish ground easily distinguished.

M. Désormeaux has several times observed encysted calculi and different fungous growths contained in the living bladder.

More than twenty years ago the idea of looking into the bladder was entertained by Segalas and others, but fell into neglect until a few years ago, when M. Désormeaux revived and accomplished it. This gentleman certainly deserves much credit for his preserving efforts in this direction; and it is to be hoped that, through the instrumentality of his urethroscope or endoscope—for he applies it to the bladder, and rectum also—valuable additions to our means of diagnosis and treatment may yet be effected. His pleasant manner and polite attention to strangers are quite remarkable, and enlist all such visitors in his favor.

Among the subjects which have greatly interested me during my sojourn in Paris, is one which, although largely medical, has yet an important surgical bearing. I allude to the application of electricity in the treatment of disease.

M. Duchesne (de Boulogne), so well known be his writings on this subject, is always pleased to receive visitors at his consultations, where his numerous patients afford a fine field for study and observation. His collection of casts, photographs and speci-

mens, microscopical and pathological, is very extensive and unique. No other, perhaps, has so well investigated muscular action. From the study of the muscles he was naturally led to that of the nerves which influence them. The various changes which take place in both the brain and spinal marrow, corresponding to the different kinds of palsey, are beautifully shown under the microscope, the views of which have been most successfully photographed. It was, I believe, M. Duchesne who first discovered that the muscles, which failed to respond to the influence of the will, were entirely susceptible to the influence of the electric irritation, and vice versa. This view, at least in the first proposition, has been confirmed by our own surgeons in gun-shot injuries of nerves, as also by the experiments on animals which I have had the pleasure of witnessing at the *College de France*, by M. Claude Bernard, on the action of the Woorara poison.

In paralysis, the result of cerebral lesions, the muscular tissue, although atrophied from the want of use, undergoes but little other alteration, whilst in that dependent on changes in the spinal marrow, the fatty degeneration of muscles sooner or later ensues, and sometimes with great rapidity. The muscles which have undergone this fatty transformation are not susceptible to the electric influence. The larger number of cases of club-foot and club-hand are dependent on this latter condition, the transformation affecting one or more of the muscles of the limbs, so that, in these instances, tenotomy seldom does much good. If the whole tissue of a muscle have become transformed into fat, nothing can restore it. The loss, in this way, of the single *tibialis anticus*, M. Duchesne considers as more serious than that of all the other muscles controlling the motions of the foot. When thus singly affected, there is a resulting *pes equinus*, with eversion of the foot by the peronei muscles, and this deformity increasing with the growth of the patient, he at length walks on the inner ankle. Were, however, the effect general, *i.e.*, embracing all the muscles of the leg, an apparatus can be worn, which, giving support to the joint, also keeps the foot in proper position, and thus diminishes both the lameness and the deformity.

A case of contracted little finger was recently presented at the clinique of Nélaton, which M. Duchesne well showed to depend on the tendon of the flexer profundus. On the opposite arm of the patient the electric current, when applied to the superficial flexor, caused the fingers to bend only at the metacarpo-phalangeal articulation; whilst its application to the inner

side of the arm, over the deep flexor, caused the additional bending of all the joints of the fingers themselves. The contrast in the flexion was very marked. M. Nélaton divided the tendon of the profundus in the palm of the hand, at its cubital margin.

On another occasion, at the same clinique, in attempting to show, on a freshly amputated leg, the accuracy with which any single muscle may be made to contract under the electric stimules, M. Duchesne was not a little disconcerted at his incomplete success, which, at the moment, he could not explain. The cause of his failure was discovered afterwards to have been a pathological agglutination of the muscles, which prevented their separate action.

In a case of "painful flat-foot," Nélaton, contrary to the opinion of M. Duchesne, divided the tendon of the long peroneus. The pain ceased for a time, that is, as long as the patient was quiet in bed. On using the limb, however, or on standing for some time, the pain returned, the patient stating that her condition was not at all improved. Having waited for the reparation of the divided tendon, M. Duchesne applied his battery, the woman avowing her improvement after each application. He states confidently that in a short time she will be completely relieved.

In these cases it is the inefficiency of the long peroneus which causes the flat-foot, being a sort of valgus, and the pain is owing to the unaccustomed pressure of the tarsal bones at the upper and outer part of the foot, where it is invariably found, at the depression of the cuboid bone and the astragalus. The arch of the foot also being destroyed, there results a painful compression of the plantar nerves.

There is, likewise, a pastry cook who had suffered in this way for many years. Although twenty years old, his pain has been entirely relieved by the electric current, and he is able to stand all day. Under its repeated use, also, there is an evident commencement of an arch to his foot.

There is a variety of paralysis, a marked specimen of which was exhibited in a boy, that M. Duchesne calls "*paralysie hypertrophique!* The muscles of the legs, though weak, are overdeveloped in size. The upper and lower limbs of the paraplegic patient seemed to belong to different individuals, so great was their disparity. Several photographic pictures of other patients exhibited the same variety of this unusual paralysis. In its cure, the hypertrophied muscles become reduced to their normal size.

A woman consulted M. Duchesne, complaining of intense

though transitory pains, shooting down the right thigh, and coming on at intervals for two or three days, and then disappearing for several months, to recur again in the same way. The arm of the same side was also somewhat effected. He remarked that such cases, in their incipiency, were very commonly mistaken for and treated as rheumatism or neuralgia, when, in reality, they were the precursory symptoms of a most grave affection. The case was one of what is called "*ataxie locomotrice progressive.*" The patient already presents other confirmatory symptoms in the ambliopia, dilatation of the pupil, and changes in the optic papilla, with inability to walk steadily with the eyes closed, all showing the cerebral trouble. The nitrate of silver has recently been much vaunted in the treatment of this affection; but as there was a slight syphilitic taint, M. Duchesne entertained the hope of relieving his patient by means of the iodide of potassium and electricity, for although the tactile sensibility of the limb was impared, its electric sensibility and contractility were not.

M. Duchesne is now publishing a new work on his favorite subject. It is a field which, in a sense, he has made his own; and the patience and enlightened zeal with which he has cultivated it are deserving of all praise. It is to be hoped that his researches will lead to still further discoveries, and confer yet more important benefits on the profession and humanity.

Yours very truly,
CHAS. A. POPE.

INVESTIGATIONS UNDERTAKEN TO PROVE THAT THE ELECTRIC CONDITION OF MINERAL WATERS IS THE PRINCIPAL CAUSE OF THEIR ACTIVITY.—M. Scoutetten has of late worked very hard to prove the above proposition, and has published several accounts of his researches in the French medical papers. To give these researches some authenticity, M. Scoutetten repeated his experiments, a short time ago, at Mont Dore, a watering-place in Auvergne, under the eye of a distinguished medical committee, whose report is inserted in *L'Union Medicale* of the 25th of July. The author states, in his introduction, that "his researches throw a new light on the question; they prove that the waters, when emerging from the soil, are in an exceptionally active condition, that a chemical action productive of electrical phenomena is going on; and that to this cause the general effects of mineral waters are to be attributed." The experiments undertaken before the committee alluded to above, have proved—1. That the platinum electrodes, placed in ordi-

nary water contained in a glass or china vessel, are not affected by even a trace of dynamic electricity; and that the needle of Nobili's galvanometer remained motionless. 2. That the same experiment, performed with mineral water immediately caused a considerable deviation of the needle. 3. That the same mineral water was examined in a like manner at various periods after collecting the water at the spring, and at different degrees of temperature, it being found that the elevation of the temperature sensibly increases the electrical manifestations; that the latter becomes weaker, on the contrary, the later the water is examined after emerging from the spring, which peculiarity is easily explained by the diminution and subsequent cessation of chemical action. Another experiment has shown that the immersion of only a portion of the human frame in mineral water is sufficient instantly to give rise to electrical phenomena, which are rendered manifest by the deviation of the needle. This important fact explains the exciting qualities of mineral waters, which qualities may be so powerful as to induce a feverish state in the individual acted upon. This property exists in all mineral waters, but in different degrees, regulated by the activity of the chemical combinations. This electrical action cures diseases by strengthening weakened organisms, which diseases are apparently widely different, but are nevertheless merely local manifestations of a general morbid state. It should be added that several experiments were undertaken with gold leaves, so as to prove that statical electricity does not exist in mineral waters. The latter have also been tried mixed with milk or syrup, and it was found that this mixture sensibly lessens the active properties of the waters.—*London Lancet.*

Chronic Farcy in Man.—A case is published in a French journal of a blacksmith who used to sleep in the stables. One of the horses was taken ill and died, without any symptoms of glanders, but affected with an extremely fœted diarrhœa. Soon afterwards the man sickened and died exhausted in hospital, with a great number of tumors which had formed in different parts of the body. One of these suppurated, and the pus was inoculated in various ways on an old horse and a donkey. Both died a few days after—the first with signs of chronic farcy, the second with those of acute glanders. The three autopsies revealed extensive deposits of softish and small tumors in the lungs.—*London Lancet.*